Labour Unions, Wellbeing, and Individual Differences: How Are Unions Related to Global and Domain-Specific Wellbeing, and Who Tends to Join Them?

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Abstract

Labour unions have been instrumental in the institution and maintenance of what many in the Western world would now consider basic business practices, from the forty-hour working week to stringent health and safety regulations. Despite their historical influence and contemporary resurgence in popularity evincing their importance to many members of the past, present, and future working class, unions are a disproportionately large blind spot in the industrial-organisational psychology literature. While several studies have found correlations between union membership or level of participation in one's union and positive and negative economic, health, and psychological outcomes, we do not know how unions affect their members' subjective sense of wellbeing. We also do not know who those members tend to be in terms of personality or sociopolitical characteristics—a significant oversight given the relationships between these individual differences, workplace outcomes, and wellbeing. This thesis sought to connect and address both gaps.

Unionised (n = 307) and non-unionised (n = 162) academic staff from public secondary and tertiary schools in New Zealand (n = 287) and Australia (n = 182) were recruited via email to participate in an online survey from June 25th to September 14th, 2023. Unionised staff were further classified as casual (n = 152) or dedicated (n = 155) members, depending on their willingness to participate in union activities. The survey assessed union attitudes and beliefs (study-specific questions, Kelly and Kelly (1994) questionnaire, New Zealand Worker Representation & Participation Survey), personality characteristics (HEXACO-60, HEXACO Interstitial Altruism Scale, Goldberg's (1999) 10-item International Personality Item Pool Representation of the NEO-PI-R Neuroticism Domain, Authenticity Scale), sociopolitical characteristics (Auckland Individualism-Collectivism Scale, study-specific questions), and global and domain-specific wellbeing (I COPPE).

Two-way ANOVAs comparing total I COPPE scores between members and non-members, and casual and dedicated members, in Australia and New Zealand, found no statistically significant differences in wellbeing; notably, mean wellbeing scores were relatively high in all groups. Logistic regression models using demographics and personality and sociopolitical characteristics significantly predicted variance in union membership (member/non-member) and participation level (casual/dedicated) in New Zealand (22.50%, 25.00%) and Australia (28.20%, 48.70%); the individual differences that served as significant predictors were different in each of the four models. Finally, a linear regression model (collapsed between countries) using demographics, individual differences, and union membership significantly predicted variance in total global wellbeing (15.60%); union membership was not a significant predictor.

Although union membership was not a significant correlate of wellbeing, most members and many non-members attributed improvements in working conditions and wellbeing to the influence of unions. We believe that, rather than having no significant beneficial or detrimental effect on wellbeing, unions positively affect the standards of the education industry holistically. Additionally, education unions seem to attract different people in different countries. It seems unlikely, then, that differences in the wellbeing of members can be attributed to correlations between individual differences and wellbeing. We conclude that future research should investigate wellbeing and individual differences in unions in different countries, industries, states of industrial relation, and time periods.

Acknowledgements

I have been writing this thesis in earnest since October, meaning my work has been overshadowed by the escalation of Israel's genocide of the Palestinian people. It has been surreal beyond expression, working on this like the end of the world is not happening on the other side of the planet. Every day I think about the tens of thousands of innocent civilians who have been martyred by the unrelenting cruelty of the colonial Zionist project and the capital interests of the Western countries who support it, including our own. I think about the 23-year-olds like me who will never enjoy the academic opportunities that I have because all of their universities have been destroyed, and because they are dead besides. I think about the 23-year-olds like me who still have a future, if only the governments of the world would intervene to save them, instead of being complicit in their murder. Literally as I write these acknowledgements (12/02/24), Israel is bombing Rafah after months of instructing Palestinian citizens to seek refuge there. Simultaneously, they are airing propaganda at the Superbowl in an attempt to distract and garner sympathy from the American consumer. I dedicate this thesis to the resilience of Palestine, and to the death of the bigoted, imperial, capitalist war machine that has occupied it for nearly a century. From the river to the sea, Palestine will be free.

Undertaking a masters thesis has been gruelling, enlightening, and rewarding in equal measure. While at times a Sisyphean task of emailing, international bureaucracy, data cleaning, and statistical analyses, I am doubtlessly better for the experience. God willing, I can make some sort of day job out of this.

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Introduction

Are you thankful for the forty-hour, five-day working week; working hour limits; the regulation of child labour; the maintenance of stringent health and safety regulations in the workplace; minimum wage; pay equity; protection from arbitrary dismissal; paid holidays; sick leave; family leave; equality in the workplace; and the advent of fringe benefits like pension or health insurance? The institution of these relatively modern working standards is due in no small part to the historic and continued efforts of labour unions (Banerjee et al., 2021; Bivens et al., 2023; Green, 2021; Hagedorn et al., 2016; Jones, 1986; Leigh & Chakalov, 2021; Neunsinger, 2018; Oldham, 2023; Rosner & Markowitz, 2020; van Daalen & Hanson, 2019; Walters & Mishel, 2003)

What Are Unions and What Do They Do?

Labour or trade unions (henceforth called unions) are independent organisations that workers can join by paying a membership fee. In return, the union communicates, protects, and advances its members' professional, economic, and political interests. Organising labour in this way is, essentially, an attempt to democratise the workplace. It accomplishes this primarily through two mechanisms: collective bargaining and industrial action. Collective bargaining sees unions negotiating collective employment agreements with employers on behalf of their members (Employment New Zealand, n.d.), who would have less bargaining power when negotiating an individual employment agreement themselves. Industrial action (a form of collective action) involves union members (henceforth called members) limiting or withholding their labour to protest working conditions, simultaneously forcing employers to negotiate with the union while increasing its bargaining power (Oxford Reference, n.d.-b). In combination, these mechanisms ensure (to the best of the union’s ability) that all members

have their pressing needs addressed, are fairly compensated for their labour, have access to appreciable benefits, and are treated equitably in the workplace.

Non-union members (henceforth called non-members) also stand to gain from union activity. In highly unionised industries, the ‘threat effect’ refers to the pressure exerted by the existence of unions on the management of non-unionised businesses to maintain competitive working conditions, lest they lose current and prospective employees to otherwise more attractive unionised businesses (Kaufman, 2005). In this regard, non-members can ride the coattails of unionism’s success without contributing to, or risking anything for, the efforts of organised labour themselves. This interpretation of non-members as passive beneficiaries is supported by Keane et al. (2012), who found a strong positive correlation between union density in democratic countries and the life satisfaction ratings of members and non-members alike.

Modern unionism arose in early 19th-century England and the United States (The Editors of Encyclopaedia Britannica, 2024), and its global influence has been so profound in the intervening years that the United Nations codified the inalienable human right to unionise in 1948 (United Nations, n.d.). Although organised labour has its roots in blue-collar work, unions today represent members of the working class in myriad industries. We define ‘working class’ as anyone whose primary form of income is wage labour (or similar), rather than business or asset ownership, which includes pink- and white-collar workers in addition to blue (Thier, 2020). Blue-collar work is characterised by manual labour, pink-collar work by care or personal services (traditionally performed by women), and white-collar work by professional services and office jobs (Academy to Innovative HR, n.d.; Oxford Reference, n.d.-a; Oxford Reference, n.d.-c). Since most people in Western society are members of the working class, most people can—and maybe should—be concerned with the influence and effectiveness of unions. There are multiple models of unionism (Meeks, 2019), and unions

operate based on different industrial, regional, managerial, and political standards, but these details are beyond the scope of this thesis.

While support for, and participation in, unions steadily declined after their peak in the 1950s (Ebbinghaus & Visser, 1999), union popularity and activity have resurged in recent years. Most notably in the United States, we've seen the fledgeling Amazon and Starbucks unions survive union-busting efforts (Greenhouse, 2023; Scheiber, 2023); the railroad workers hold the country's economy hostage to protest their working hours and insufficient leave (Sainato, 2022); the Writers Guild of America and Screen Actors Guild-American Federation of Television and Radio Artists strikes shut down Hollywood over poor employment terms, inadequate streaming residuals, and inappropriate AI use (Cerullo, 2023; Los Angeles Times Staff, 2023); and the United Auto Workers union simultaneously strike against Ford Motor Company, General Motors, and Stallentis for the first time ever (Isidore & Yurkevich, 2023). Closer to home, we've seen strikes from educators and healthcare providers in New Zealand and Australia over poor pay, excessive workload, staff shortages, and COVID-19-related health concerns (Evans, 2023; Kenny, 2023; Meacham, 2023; RNZ, 2023). This revival of union culture has been a multigenerational effort, with Generation Z (generally considered those born between 1997 and 2012 (Eldridge, 2024)) championed as 'Generation Union' by analysts and commentators (Meyerson, 2022). Even Teen Vogue, a publication once dedicated to fashion and celebrity gossip, regularly promotes unionism as part of its widely read political coverage (Kelly, 2023; Oldham, 2023).

The Troubled Relationship Between Unions and Industrial-Organisational Psychology

Despite the multigenerational popularity of unionism and its undeniable sociopolitical impact over the last two centuries, there is a relative dearth of psychological research about it. Industrial-organisational (I/O) psychologists have been aware of this lacuna in the literature for over forty years (Gordon & Burt, 1981), but little has been done to fill it. The index of the

726-page-long *Handbook of Industrial and Organizational Psychology* (2nd ed.) does not reference unionism or organised labour in any form (Dunnette & Hough, 1990), which is ironic, as the first chapter laments how "demands from organisational sponsors for quick and easy answers have perpetuated schisms between our science and our practice" (Dunnette, 1990, p. 1). As Lefkowitz (2017) suggests, I/O psychology's disinterest in and, at times, active opposition to organised labour, has constituted a serious professional and ethical failing. Part and parcel of this criticism is psychology's seeming willingness to "[leave] theoretical and empirical concerns with social class largely to sociology" (Lott, 2014, p. 1), sidelining the interests of the working class and the institutions that represent them in the process. These issues can be partially explained by the dependence of in-vitro I/O research on the passive support or active patronage of for-profit management, who are, intentionally or otherwise, antagonistic to the working class.

Historically, unionists became distrustful of I/O psychologists because many of them conducted research that could be used by management to undermine the interests of organised labour (Gordon & Burt, 1981); this facilitated an insidious form of union busting that circumvented anti-union busting laws of the time. For example, in the early 20th century, arguably invalid personality tests were used to propagate the myth of the average unionist as a mentally unstable neurotic, enabling employers to screen these "maladjusted individuals" out of their businesses (Zickar, 2001). Tensions between unionists and psychologists were exacerbated by the (perceived) similarity of I/O psychology to Taylorism: a contemporaneously developed system of "scientific management" that prioritised exploitative, automation-like efficiency over the wellbeing of workers (Gordon & Burt, 1981). To realise the general principles outlined in the American Psychological Association's Code of Ethics, I/O psychologists must redress these historical failures by conducting unbiased research that prioritises the human needs of the working class.

From a psychological perspective, the fundamental goal of unionism is to improve the wellbeing of union members, if not all workers. Thus, it behoves us to understand to what extent unions affect the wellbeing of their members, and whether their potential effects tend to be more positive or negative. Demonstrating who does and does not tend to unionise is also important, if for no other reason than to correct the negative stereotype of unionists created by bad actors and poor science in the past. In 2022, there were 133 registered unions in New Zealand alone, with 400,309 members between them (New Zealand Companies Office, n.d.). Given the diversity of personality characteristics in our population, it would be statistically improbable for 14.3% of New Zealand's workforce to be, on average, overly neurotic, paranoid, or otherwise ambiguously "maladjusted" (Zickar, 2001). Our focus, then, is how do unions affect the wellbeing of their members and who actually tends to unionise.

The Potential Relationship Between Unions and Wellbeing

Laypeople and academic disciplines outside of psychology tend to conceive of wellbeing as a largely objective matter: A person with a clean bill of health has high physical wellbeing, a person with a high salary has high economic wellbeing, and so on. In psychology, wellbeing is subjective. It is not directly concerned with objective living conditions, but with how people think and feel about them: the interactions between living conditions and a person's unique wants and needs (Maddux, 2017). The cognitive and affective evaluations involved can be made about life as remembered in the past, experienced in the present, or imagined in the future.

For the purposes of this thesis, wellbeing is measured at two levels: subjective and domain-specific. Subjective wellbeing (which is a common name in the literature but somewhat of a misnomer, so we will call it global wellbeing, for clarity) refers to evaluations made about one's quality of life holistically (Stone & Mackie, 2013). At this level, people decide whether their life is enjoyable and meaningful. Domain-specific wellbeing refers to

evaluations made about certain aspects of one's life (Warr & Nielsen, 2018). At this level, people decide whether their wants and needs in a given "domain" of life have been, are being, or are likely to be met, consistently. For instance, economic wellbeing depends in part on whether a person's income sufficiently meets their basic financial needs, aligns with their economic expectations or aspirations, and funds their desired lifestyle. These domains can be thought of as the wants and needs relevant to evaluations of global wellbeing, reflecting the bidirectional relationship between the two levels (Prilleltensky et al., 2015).

Everybody has different wants and needs, influenced by geopolitical, cultural, and socioeconomic standards, which are evolving in the wake of globalised mass media (Diener, 2012). This makes it nigh on impossible to study wellbeing exhaustively. In this study, we chose to focus on global wellbeing and six domains: interpersonal, community, occupational, physical, psychological, and economic. These seemed the most pertinent domains in an average workplace context and, by extension, an average union context. Workplaces are communities involving unique interpersonal relationships dictated by one's class and position in a professional hierarchy; the source of employment and income for the average working-class citizen; and determinants of physical and psychological health, based on the nature of one's work, their working conditions, and the medical care afforded them by income and fringe benefits. Unions are communities that promote interpersonal relationships between workers, ideally positively affecting community and interpersonal wellbeing. Through industrial action, unions seek to leverage the relationships between members to improve working conditions, intending to positively affect occupational, economic, physical, and psychological wellbeing. Ultimately, these hypothetical domain-level changes would lead to positive changes in global wellbeing. Investigating how unions relate to these six key domains and global wellbeing besides should give us the best big-picture understanding of their effectiveness.

It is important to note the difference between wellbeing and 'satisfaction,' i.e., life satisfaction, job satisfaction, etc. Though related, they are distinct constructs. In Diener's (1984) popular tripartite model of subjective wellbeing, life satisfaction is only one of three components. Similarly, job satisfaction is considered a likely indicator of occupational wellbeing (Weiss et al., 2022). Satisfaction with life or its domains, then, is an important contributing factor to global or domain-specific wellbeing, but not a proxy or equivalent. Consider the difference between job satisfaction and occupational wellbeing: A person might be more or less satisfied with their job because it meets their economic needs, they don't mind their coworkers, and the work is low stress. In other words, their job is inoffensive. However, wellbeing is not just the absence of negative things, but the presence of positive things. If the person finds their job boring or unfulfilling, or they would rather work in another role or field, they might have lower occupational wellbeing than would be expected given their job satisfaction. Some believe that a key difference between wellbeing and satisfaction lies in the pursuit of eudaimonia (meaningful experiences) versus hedonia (pleasurable experiences) (Maddux, 2017), but dissecting these philosophical constructs is beyond the scope of this thesis. Distinguishing between wellbeing and satisfaction at all is important to this thesis because while I/O psychology's unionisation-wellbeing literature may be nascent, the unionisation-satisfaction literature is relatively substantive and multidisciplinary.

Research has demonstrated a negative correlation between unions and job satisfaction since the 1970s. In a landmark study of 1,873 U.S. workers, Borjas (1979) showed that, when pay was controlled, members of any sort of union tended to report lower job satisfaction than non-members. Despite this prevalent relationship, a study of over 100,000 American workers conclusively showed that members were significantly less likely to quit than non-members (Freeman, 1980). Freeman and many of his contemporaries attempted to explain this

counterintuitive phenomenon using the exit-voice model, wherein dissatisfied non-members commonly express their dissatisfaction by exiting the job, while dissatisfied members can voice their problems to management—protected by their union—and stay in the business to negotiate better outcomes via collective bargaining—which is actually to the benefit of the business, which doesn't have to spend the time and money onboarding replacement staff. To that end, researchers have suggested that unions may deliberately (though not necessarily maliciously) increase dissatisfaction by making workers aware of poor working conditions, galvanising their members to increase their bargaining power (Blanchflower & Bryson, 2020). Of course, it is only right that workers understand the quality of their working conditions; if they are poor, dissatisfaction is a natural response. It is not entirely fair or accurate, then, to say that unions deliberately increase dissatisfaction when it is an unavoidable consequence of their work. By extension, if job dissatisfaction were to arise from unionisation, and said dissatisfaction negatively affected occupational wellbeing, it would not be entirely fair or accurate to say that the union itself negatively affected occupational wellbeing.

Others explained this relationship by focalising the role of management and the nature of work. Pfeffer and Davis-Blake (1990) criticised Borjas' seminal study, among others, for neglecting to control for workplace conditions that "are likely to be proximate causes of both dissatisfaction and unionization" (p. 7). Using a sample of 978 U.S. workers, and comprehensive measures of job satisfaction and select job attributes (autonomy, quality of supervision, conflict, and work pace), they showed that the worse a person rated the attributes of their job, the more likely they were to be a union member. In other words, it seemed more likely that job dissatisfaction led to unionisation, rather than unionisation leading to job dissatisfaction as previous researchers suggested. The forward-causal relationship better describes the reality of organised labour, given its historic roots and modern prevalence in

gruelling, dangerous, low-autonomy blue-collar occupations. Additionally, Pfeffer and Davis-Blake found a positive relationship between union membership (henceforth called membership) and job satisfaction, which was most pronounced when a member was actively involved with and felt empowered by their union. This relationship satisfied Pfeffer and Davis-Blake's expectations: As they described, unions reduce wage inequality while increasing worker autonomy and the transparency of managerial processes, which prior research says should increase job satisfaction. Moreover, increased participation in the union may lead members to rationalise their efforts by evaluating their working conditions more favourably (Aronson, 1972). Members of white-collar and craft unions were more likely than members of blue-collar and industrial unions to feel committed to and empowered by their unions, and to participate in union activities (e.g., vote in elections, hold a role in office), meaning the former groups had, on average, higher job satisfaction than the latter group.

A recent study by Blanchflower and Bryson (2020) revealed similar results on an international (Western) scale. They analysed the responses of nearly two million workers to multiple surveys in the United States (General Social Survey and the Gallup Daily Tracker) and Europe (European Social Survey, British Household Panel Survey, and Understanding Society) and found that the relationship between membership and job satisfaction varied over time, based on nearly fifty years of data. The variance was due to a birth cohort effect, with those born in the 1940s-1950s producing a negative relationship, and those born in the 1960s-1990s producing a positive relationship. Consequently, post-2000, membership became positively correlated with job satisfaction. Overall, it seems likely that unions affect occupational wellbeing—and indeed, a union's ability to positively affect occupational wellbeing should be the baseline by which its effectiveness is measured—but given the conflicting relationships evidenced in the literature, the exact nature of their relationship remains ambiguous.

Blanchflower and Bryson (2020) also investigated the effect of membership on other likely wellbeing indicators. When standard demographic characteristics, education, diet, exercise, occupation, income, marital status, and health were all controlled, they found a partial positive correlation between membership and (what they call) life satisfaction, which was measured by the Cantril Ladder (as we discuss in our method, the wellbeing measure we use in this thesis employs a slightly rephrased Cantril Ladder to assess global wellbeing). This harkens back to the work of Keane (2012), which showed that people who lived in highly unionised countries had higher life satisfaction than those who did not, regardless of personal membership. Overall, the evidence suggests that unions positively affect global wellbeing, especially if they positively affect multiple wellbeing domains.

Previous research on unionisation's relationship with psychological wellbeing has produced contradictory results. MacBride et al. (1981) showed that blue-collar workers experienced greater psychological distress when preparing to strike than they did four and ten months later. In a study of teaching staff and counsellors whose strike was terminated without successfully negotiating a contract settlement, Barling and Milligan (1987) showed that stress attributed to poor industrial relations was correlated with low psychological wellbeing and psychosomatic symptomatology immediately following the strike and for up to six months after. Similarly, when comparing 302 striking and 49 non-striking unionised steelworkers, Fowler et al. (2009) showed that strikers had higher depression and anxiety, and lower mental health, than non-strikers; interestingly, strikers who participated in more striking activities reported lower depression and anxiety, and higher mental health, than strikers who participated in less. Largely contrary to these studies, Blanchflower and Bryson (2020) found that membership was positively correlated with happiness, peacefulness, and recent experiences of pain and anger, and negatively correlated with stress, depression, loneliness, and worry about money. They speculated that members recently experiencing pain and anger

more frequently than non-members might reflect the businesses that tend to unionise (e.g., physically demanding blue-collar work), a rationale supported by Pfeffer and Davis-Blake's research. Alternatively, unionisation might entail pain and anger, or unions might attract dispositionally angry people with chronic pain, but there's not enough research to say, and these explanations seem less likely. Also using data from the European Social Survey, Reynolds and Buffel (2020) analysed 52,737 responses collected over eight years to show that people who lived in highly unionised countries reported fewer depressive symptoms than those who did not, regardless of personal membership. Though unrelated to unions specifically, environmental activists who participated in collective action commonly reported positive changes in their personal beliefs, desire to act politically, feelings of empowerment and self-esteem, and their knowledge and skill bases (Vestergren et al., 2018). There is no obvious reason that these effects would not also apply to industrial action. Overall, it seems likely that unions affect psychological wellbeing, but whether their effect tends to be more positive or negative may depend on how involved a member is with their union and the state of industrial relations.

Being injured on the job is likely to reduce physical wellbeing. Unions decrease the odds of being injured by advocating for stringent health and safety regulations, which include regular breaks, limited shift length, and sufficient downtime between shifts—overwork has been unequivocally associated with increased risks of occupational injury, cardiovascular disease, fatigue, sleep disturbance, depression, anxiety, and other negative physical and psychological health outcomes (Wong et al., 2019). While the nature and severity of the injuries one can sustain in the course of their work varies widely by occupation and working environment, even relatively 'safe' jobs can lead to conditions like chronic back pain (Mahdavi et al., 2021) or occupational overuse syndrome (Southern Cross, 2020), meaning health is always a relevant concern. If someone does experience physical or psychological ill-

health as a consequence of working, unions advocate for better sick leave policies, medical coverage, and counselling services to aid their recovery. In their review connecting the economic and epidemiologic literatures, Leigh and Chakalov (2021) identified the common health-related benefits of unionisation—like health insurance or health and safety regulations—and described four "consensus" and 16 "likely" pathways by which unions would be beneficial to the health of workers, but none in which they would be detrimental. Overall, it seems likely that unions positively affect physical wellbeing, but the extent of their effectiveness is likely to differ by occupation. Specifically, improved health and safety regulations and medical-related fringe benefits should have a larger effect on a blue-collar worker's physical wellbeing than a white- or pink-collar worker's.

Closely related to psychological and physical wellbeing are interpersonal and community wellbeing, which relate to feelings of mutual security, respect, and care in personal and group relationships. Social identity theory describes how people's identities are often defined by group membership and how that influences wellbeing. If someone's group gives them a sense of purpose, as unions give their members a political purpose, it benefits their mental health (Haslam et al., 2009). Group membership also affects how people interpret threats and, if they feel socially and materially supported by their fellow members, how they perceive their ability to overcome challenges collectively (Charles et al., 2023). Charles et al. found that the more diverse groups people belonged to, the higher their wellbeing tended to be. Using a longitudinal dataset with 5,838 respondents, they showed that, with four years between times one and two, people who reported belonging to multiple diverse groups at time one reported greater psychological health (what Charles et al. refer to as wellbeing) at time two than those who belonged to fewer groups. Being populous, well-connected communities within the professional sphere, unions may afford all these benefits. Corroborating this, Sinclair and Tetrick (1995) found that feeling supported and valued by

one's union was a greater predictor of union loyalty, responsibility to the union, willingness to work for the union, and belief in unionism, than ratings of union instrumentality—that is, one's perceptions of their union's effectiveness. In other words, for many members, the interpersonal and communal benefits of membership outweigh the union's material utility. Ergo, if a member identifies strongly with their union and forms meaningful interpersonal relationships with their fellow members, it seems likely that it would benefit their psychological, interpersonal, and community wellbeing.

Despite the potential positives, identifying strongly with one's union might lead to conflict with anti-union individuals. Depending on who the anti-union individual is and their relation to the member, this conflict could directly or indirectly threaten the member's personal or group relationships. This is of particular concern in an occupational context, where the anti-union individual might be one or more members of management, potentially affecting the member's standing with superiors and coworkers in the workplace community. Overall, it seems likely that unions may affect community and interpersonal wellbeing, but it is unclear in what way. Their effects likely depend on how closely one identifies with their union, in turn depending on how effective or supportive they perceive their union to be, and whether their non-union personal and group relationships are characterised by pro-, neutral-, or anti-union beliefs.

Because one of the fundamental goals of unions is increasing wages, it seems likely that unions have a positive effect on economic wellbeing; membership has been associated with higher pay satisfaction since the 1980s (Berger et al., 1983). It is never the case that union members make less money than non-members for the same job, so we would expect members to have equal or higher economic wellbeing than non-members.

It's possible—and maybe likely given the previously described research—that the extent to which unionism affects wellbeing, and whether that effect is positive or negative,

changes with the zeitgeist, political climate, or periods of intense union activity. In the 19th and early 20th centuries, the highs and lows of unionism were much greater than they are today, so one might hypothesise that unionism had a more dramatic influence on wellbeing in the past. On one hand, members were fighting to establish what we now consider fundamental worker's rights, resulting in meaningful quality-of-life improvements for the working class at large in multiple wellbeing domains. On the other hand, the cost of participating in union activity was much higher, with management routinely employing union-busting tactics ranging from firing members to murdering them (Dehler, n.d.). In the modern Western world, union-busting has been illegalised, especially when it involves homicide—even if select executives are reportedly content to let protesting workers "[lose] their apartments and [lose] their houses" (Patten, 2023, para. 8) before negotiating with them. While the work of Western unionists today is no less important than it was a hundred years ago, they do tend to fight with management over relatively less significant issues than they once had to, and usually face less serious consequences in the process.

This is not so in the Eastern world, where unionists are still killed for protesting what is sometimes tantamount to slavery—as has been the case in Bangladesh (Ahmed, 2023) and the Philippines (Human Rights Watch, 2023) most recently. At the time of writing, the garment worker unions in Bangladesh rejected the government's proposed 56% raise because their current wage is so low that even an increase of that magnitude fails to "match the soaring cost of food, rent, healthcare, and school fees for their children" (France 24, 2023, para. 14). Unions can only win battles that management or government are willing or able to lose; unions can apply significant pressure via industrial action and public support, but that doesn't guarantee their ability to secure appreciable benefits. This demonstrates psychology's unique ability to describe modern unionism's success (or failure) in humanistic terms by illustrating the similarity or disparity between objective conditions and the average member's

self-reported wellbeing, rather than making assumptions about wellbeing based on mechanistic information like economic data.

Maximising wellbeing is a worthy, self-explanatory goal, and one that naturally motivates much of human behaviour. Most schools of moral philosophical thought agree that we all have a duty of care to each other, which involves improving the wellbeing of others within your means. Given their managerial power and economic capital, employers have the means to improve the wellbeing of their employees, and great swathes of society besides. This is why their duty of care is enshrined in law and unions fight to expand its terms. However, it is not only a moral and legal obligation: a wealth of I/O research tells us it is a professional imperative. In their meta-analysis of 339 studies featuring nearly two million employees, Krekel et al. (2019) demonstrated significant positive relationships between component measures of wellbeing (e.g., mood, satisfaction) and creativity, productivity, and task performance at the individual level, and customer loyalty and profitability at the firm level. There was also a negative relationship with employee turnover. The lack of relevant experiments means we cannot conclude the directionality of these relationships, nor whether they are causal in the first place, but the evidence is provocative. Suppose unions are associated with meaningful increases in wellbeing that translate to positive workplace outcomes. In that case, it may be in the best interests of employers to interface with them more cooperatively, or even collaboratively.

In summary, the last fifty years of economic and psychological research have evidenced a mixture of negative and positive correlations between membership or participation in collective/industrial action and various forms of wellbeing or their indicators. While the verdict remains unclear, the balance of evidence seems to suggest that unions tend to, or should, affect wellbeing or its indicators positively, particularly in the modern day and in highly unionised countries. Ergo, we would expect members to report greater global and

domain-specific wellbeing than non-members. Few studies have investigated the effects of unionisation on multiple wellbeing domains at the same time, using the same sample. Even fewer have used self-report measures of subjective wellbeing, instead measuring satisfaction or other potential contributing factors and—not unreasonably, but not necessarily accurately—assuming a state of wellbeing from them. We hoped to start addressing these gaps in the literature with this thesis.

The Potential Relationship Between Unions and Individual Differences

While understanding the long-neglected relationship between unions and wellbeing is the primary focus of this thesis, we have a secondary interest in the kinds of people who tend to unionise. Parkes and Razavi (2004) highlight that this is also a psychologically neglected topic, with most research about who tends to unionise focusing on structural factors, rather than individual differences. Besides addressing this gap and redressing historically biased research (Zickar, 2001), some personality characteristics (e.g., extraversion, authenticity) and what we call sociopolitical characteristics (e.g., individualism-collectivism, political orientation) have been correlated with wellbeing in previous research, as we discuss below. If it were the case that unions attract people with certain personality and sociopolitical characteristics, then potential differences in wellbeing between members and non-members might be (at least partially) attributable to said characteristics, rather than the effects of unionisation itself.

Unions and Personality Characteristics

Personality describes a collection of relatively stable traits that inform a person's self-concept, emotional patterns, and behaviour (American Psychological Association, 2018). There are multiple models of personality comprised of different personality traits, which can be measured via personality assessments. Professional organisations regularly employ personality assessments, believing that specific trait combinations will predict the job

performance of a prospective employee and their ability to successfully integrate into the organisation's ecosystem (TBAE Team Building and Events, 2023); employers presume these predictions enable them to select optimal employees. Our personality characteristics of interest were the six traits comprising the HEXACO model of personality, altruism, neuroticism, and authenticity.

HEXACO is an acronym of the traits Honesty-Humility (comprised of sincerity, fairness, greed avoidance, and modesty facets), Emotionality (comprised of fearfulness, anxiety, dependence, and sentimentality facets), eXtraversion (comprised of social self-esteem, social boldness, sociability, and liveliness facets), Agreeableness (comprised of forgiveness, gentleness, flexibility, and patience facets), Conscientiousness (comprised of organisation, diligence, perfectionism, and prudence facets), and Openness to Experience (comprised of aesthetic appreciation, inquisitiveness, creativity, and unconventionality facets); the HEXACO can also include Altruism (versus Antagonism), which measures the tendency to be sympathetic and generous (Lee & Ashton, n.d.). We use the HEXACO due to its use in previous occupational research. Saltukoğlu et al. (2019) found that, in 852 people from 154 different professions, extraversion and conscientiousness positively predicted job performance, and extraversion, agreeableness, and conscientiousness positively predicted job satisfaction. In a meta-analysis of 749 scientific articles, Pletzer et al. (2020) found that honesty-humility, agreeableness, and conscientiousness are negatively correlated with workplace deviance and, moreover, the HEXACO was a better predictor of workplace deviance than the Big Five (a similar, older model of personality). A second meta-analysis by McAbee et al. (2019) found positive correlations between honesty-humility and prosocial interpersonal and organisational behaviours. We included altruism because of its obvious relevance to unionism—unions rely on members' willingness to sacrifice in times of

industrial conflict to win benefits for all members, so investigating members' tendency to be altruistic is pertinent.

The use of biased personality assessments in the 1900s led to claims that unionists tended to be highly neurotic (Zickar, 2001). This was partially supported in 2004 by Parkes and Razavi (2004), who used the Eysenck Personality Questionnaire to demonstrate that neuroticism was a significant predictor of membership in 582 UK driving examiners, while extraversion was not. That said, by analysing neuroticism and extraversion scores as an interaction term, they found that members tended to be high in neuroticism and low in extraversion or high in extraversion and low in neuroticism, rather than high or low in both traits. Contradicting these results, a study of 1,700 workers in Lombardy using the Big Five model (openness, conscientiousness, extraversion, agreeableness, and neuroticism) found negative correlations between neuroticism and openness and membership, in addition to positive correlations between conscientiousness and agreeableness and membership (Lucifora & Sturaro, 2020). Despite highly conscientious people apparently being more likely to unionise, a study of 282 Canadian union members found a negative correlation between conscientiousness and intention to participate in union activities, in addition to a positive correlation between extraversion and intention to participate (McPhee et al., 2014). Finally, higher extraversion was an antecedent of willingness to join a union in 168 American undergraduate students (Houghton, 2000). Despite the obvious connection between unions and altruism, we were unable to find research measuring the altruistic tendencies of union members. Clearly, it is unclear how personality traits relate to unionisation.

Previous research has also demonstrated correlations between our personality traits of interest (the HEXACO traits and neuroticism) and wellbeing. In a meta-analysis of 334,567 participants who completed a HEXACO or Big Five measure and a subjective or psychological wellbeing measure, Anglim et al. (2020) showed moderate correlations

between trait scores and wellbeing when averaging correlations across nine wellbeing indicators. In order of decreasing size, the HEXACO correlations were: .48 (extraversion), .28 (conscientiousness), .18 (agreeableness), .17 (altruism), .16 (honesty-humility and openness to experience), and -.16 (emotionality). The largest correlation of the Big Five traits (-.46) belonged to neuroticism. Furthermore, in a review of the personality and wellbeing literature, Lucas and Diener (2015) concluded that personality traits are greater predictors of wellbeing than external, circumstantial predictors like income or health; because there is a wide array of external factors that can potentially affect wellbeing, each has a small effect in actuality, especially relative to the narrower array of personality traits, which tend to have larger effects.

If personality traits account for a significant proportion of wellbeing, and unions tend to attract people who are high or low in certain traits, it is important to know what those dispositions are: Union membership and participation in union activities are external factors that primarily influence other external factors like income and health, meaning they likely have a smaller effect on wellbeing than personality traits. Thus, if we intend to clarify the relationship between unions and wellbeing, we must understand who tends to join them and what their dispositional wellbeing is likely to be.

Authenticity is our second personal characteristic of interest. We define authenticity using the 'true self' and tripartite model of self-alienation, authentic living, and accepting external influence, as described by Wood et al. (2008). The true self represents actual experiences, consisting of physiological states, emotions, and schematic beliefs. Self-alienation describes the degree of congruence between a person's actual experiences and their conscious awareness of their experiences, which naturally differ; this congruence is the feeling of 'knowing one's true self' that is central to most definitions of authenticity. Authentic living describes the degree of congruence between a person's behaviour and their

conscious awareness of their true self. Finally, accepting external influence accounts for the social environment, whereby self-alienation and authentic living are affected by feeling the need to respond to the expectations and beliefs of others.

Wood et al. (2008) used this model to develop the Authenticity Scale. Using the Authenticity Scale, they found that authenticity was positively correlated with the Big Five's conception of extraversion, agreeableness, conscientiousness, and openness, and negatively correlated with neuroticism. These correlations accounted for 11-13% of the variance in the Authenticity Scale's Self-Alienation, Authentic Living, and Accepting External Influence subscales. None of the subscales correlated significantly with HEXACO's conception of honesty-humility. They also found that authenticity was moderately correlated with indicators of subjective and psychological wellbeing.

Authenticity plays a unique role in the workplace. Due to general standards of professionalism, specific workplace culture, and the working requirements of a given job, a worker cannot always act in accordance with their true self and must accept several external influences, reducing their authenticity. Compounding this negative effect, a person's true self may be explicitly at odds with the demands of a given job. But, if a person needs their job and cannot find better work, they have to endure the incompatibility between their true self and their working environment. Person-environment fit theory, which has been very influential in I/O research, suggests that this incompatibility will increase the person's stress and reduce their wellbeing (van den Bosch & Taris, 2014). Using their own measure of authenticity at work (based on the aforementioned tripartite model) with 685 Dutch workers, van den Bosch and Taris (2014) showed that higher authentic living was positively correlated with positive workplace and wellbeing outcomes (e.g., work engagement, personal accomplishment, in-role performance) and lower self-alienation was positively correlated with negative workplace and wellbeing outcomes (e.g., emotional exhaustion, turnover

intention, low job satisfaction). In a meta-analysis of 75 studies with 36,533 participants, Sutton (2020) found positive correlations between authenticity and both global wellbeing (.40) and employee engagement (.37).

We believe that unionisation should facilitate increased authenticity at work. Unions allow members to voice their complaints to affect positive workplace change, increase their work-related autonomy, and exercise their political or moral beliefs about the nature of work. This should increase authentic living and decrease self-alienation directly, if not through improvement to person-environment fit.

Unions and Sociopolitical Characteristics

Our sociopolitical characteristics of interest—so-called because they describe how a person conceives of society and their role in it, and how they engage with its political systems—are individualism-collectivism and political orientation. Individualism and collectivism are dichotomous sociocultural ideologies. Western societies tend to be more individualistic, while Asian, African, and South American societies tend to be more collectivistic (American Psychological Association, 2018.; Humphrey et al., 2020). Individualism emphasises individuality, independence, personal values, self-interest, maintaining personally beneficial relationships, and the pursuit of personal goals rather than group goals (Humphrey et al, 2020). Collectivism emphasises one's membership of, social role in, and responsibility to a group, which entails interdependence, the internalisation of group values, the maintenance of harmonious relationships between group members regardless of personal costs or benefits, and the pursuit of group goals rather than personal goals (Shulruf et al., 2007). These ideologies extend to the culture and operations of the workplace. Organisations can be more individualistic or collectivistic, appealing to and positively affecting people with congruent ideologies—another example of person-environment fit (Parkes et al., 2001). Similarly, when people receive individualistic or

collectivistic-congruent organisational training, their self-efficacy and work performance improve (Earley, 1994).

Unionism is a collectivistic endeavour. People may unionise for their own benefit, but the philosophy of organised labour emphasises the social roles and responsibilities of the working class, interdependence between workers, the internalisation of organised labour's sociopolitical and socioeconomic values, developing relationships that benefit the cause, and the pursuit of union goals. Unsurprisingly, a study of 464 US workers across multiple industries evidenced a positive correlation between collectivism and positive union-related attitudes and beliefs (Beadles et al., 2023). Person-environment fit suggests that collectivists would prefer this environment and potentially experience wellbeing benefits. Conversely, unions may be incongruent with an individualist's values, potentially causing stress and decreased wellbeing. Similarly, Earley's work suggests that collectivists may perform union activities with higher confidence and effectiveness than individualists. The more effectively union activities are performed, the more successful the union is, and (theoretically) the greater its positive effects on wellbeing.

It is unclear how individualism and collectivism are related to wellbeing themselves, a problem exacerbated by the disparity in living conditions between typically individualistic (first world) and typically collectivistic (third world) societies, leading to national differences in wellbeing based on healthcare and economics (Humphrey et al., 2019). Even so, a growing body of literature suggests that individualism is associated with loneliness, lower quality interpersonal relationships, and reduced social support; anxiety, depression, neuroticism, and suicidal tendencies; and, ultimately, lower psychological wellbeing (Eskin, 2013; Humphrey et al., 2020; Nezlek & Humphrey, 2023; Quartly-Scott et al., 2004).

Our second sociopolitical characteristic of interest is political orientation, which describes where someone falls on the left-right political spectrum. Those on the left are

socially, politically and economically radical, those on the right are socially, politically and economically conservative, and centrists take a moderate position (Eldridge, n.d.). In theory, organised labour is a leftist philosophy, motivated by a desire for class equality. In practice, the culture of a given union and its leadership can fall anywhere on the political spectrum. We would still expect most unions to be left-wing, especially since right-wing politicians to this day oppose unionism—at least in the United States (Greenhouse, 2022). In a study of ten countries, including the United States and New Zealand, Napier and Jost (2008) found that people who identified with right-wing politics reported greater happiness and life satisfaction than those who identified with left-wing politics. If unions attract left-wing workers who have lower wellbeing than their right-wing coworkers due to feelings about broader social inequalities, it may misrepresent the effect of unionisation on wellbeing. Alternatively, unions provide left-wing workers with the means to reduce workplace and class inequality through political action, potentially improving their wellbeing.

Motivations to Unionise and Levels of Participation in Union Activities

Throughout this introduction, we have referenced the motivations workers might have to unionise, and members participating in union activities to varying degrees. These are our final two considerations about the people who tend to unionise. First, we propose a division between members based on their motivation to unionise, using an instrumental-ideological spectrum, informed by Wheeler and McClendon's (1991) explanation of support for unions. Members with more instrumental motivations join a union for practical purposes, intending to alleviate their dissatisfaction with the nature of work. Members with more ideological motivations join a union for political or philosophical reasons, believing it is the right thing to do. Second, we propose a division in 'participation level' between casual and dedicated union members. Not all members value their membership or participate in their union equally. Most

simply, ‘casual’ members participate in fewer union activities and consider their membership a less important aspect of their identity than ‘dedicated’ members do.

Summary, Research Questions, and Hypotheses

In summary, unions are a way to organise members of the working class to advocate for workers’ collective interests. Despite the pivotal role they have played in labour relations and the improvement of working conditions over the last two centuries, unions remain under-researched by I/O psychologists due to past grievances or conflicts of interest. Given their enduring nature and popularity with today’s youth, it behoves us to understand who tends to unionise and to what degree unions are actually able to improve the wellbeing of their members. It is also imperative that we research unions in different countries: Much of the existing work has been conducted in North America or Europe, which may not be representative of the rest of the world considering national differences in culture, business, politics, and standards of wellbeing. To understand the unionisation-wellbeing relationship, we have chosen to investigate seven dimensions of wellbeing relevant to work and union contexts: global wellbeing and the interpersonal, community, occupational, physical, psychological, and economic domains. To understand who tends to unionise, we have chosen to investigate several personality and sociopolitical characteristics. Measuring these characteristics will provide an understanding of the average member and non-member—potentially dispelling negative stereotypes of unionists created by biased psychological research—and allow us to control for confounding determinants of wellbeing that are likely relevant in a union context. For reasons we will discuss in the method section, we chose to investigate these relationships by recruiting public secondary and tertiary educators in New Zealand and Australia. This thesis attempted to answer the following questions and test the following hypotheses:

Question 1A: To what extent does global and domain-specific wellbeing differ between members and non-members, and casual and dedicated members? Furthermore, to what extent does the global and domain-specific wellbeing of these groups differ between New Zealand and Australia?

Hypothesis 1A: Global, interpersonal, community, occupational, physical, psychological, and economic wellbeing would differ between members and non-members. We were unsure how wellbeing would differ between casual and dedicated members or New Zealand and Australia.

Question 1B: To what extent do perceptions of union efficacy differ between members and non-members, and casual and dedicated members? Furthermore, to what extent do these groups' perceptions of union efficacy differ between New Zealand and Australia?

Hypothesis 1B: Members and dedicated members would perceive unions as being more efficacious than non-members and casual members, respectively. We were unsure how perceptions of union efficacy would differ between New Zealand and Australia.

Question 2A: To what extent do individual differences (HEXACO, altruism, neuroticism, authenticity, political orientation, and individualism-collectivism) differ between members and non-members, and casual and dedicated members, in New Zealand and Australia?

Hypothesis 2A: Individual differences would differ between members and non-members. Specifically, we expected members to be further left-wing, higher in measures of authenticity, and lower in measures of individualism than non-members. We were unsure how individual differences would differ between casual and dedicated members.

Question 2B: To what extent do motivations to unionise differ between casual and dedicated members in New Zealand and Australia?

Hypothesis 2B: Motivations to unionise would differ between casual and dedicated members. Specifically, we expected dedicated members to have more ideological motivations than casual members. We were unsure how motivations would differ between New Zealand and Australia.

Question 2C: To what extent do reasons for not unionising differ between non-members in New Zealand and Australia?

Hypothesis 2C: Reasons for not unionising would not differ between New Zealand and Australian non-members.

Question 3: To what extent can the global wellbeing of academic staff in New Zealand and Australia be predicted by unionisation over and above individual differences?

Hypothesis 3: Union membership would predict global wellbeing over and above individual differences.

Method

Setting

We surveyed academic staff from public secondary and tertiary schools in New Zealand and Australia. We chose to study the education industry because it is highly unionised in both countries. We hoped that a higher union density would result in the study being better received (due to the presumed prevalence of pro-union attitudes) and a greater proportion of members participating. We excluded private schools because their management structure permits a much smaller union presence than in the public system, and it is standard that their staff negotiate employment agreements individually. We did not include primary schools because the needs and responsibilities of a primary educator are dissimilar to those of secondary and tertiary educators, as are the students they teach and the managerial structures they interact with.

Because the relationship between unionisation, wellbeing, and individual differences may vary between countries, we wanted to sample from at least one other country that was similar to NZ socioculturally, politically, and professionally. While recruiting from a dissimilar country would have provided valuable information, it is intuitive to assume greater variance between dissimilar countries and smaller variance between similar ones. Therefore, if the variance between similar countries is large, it is more informative about how nationally variant these relationships are likely to be. After consulting with the University of Waikato's ALPSS Ethics Committee, we chose Australia as our similar country.

This study, FS2023-18, received ethics approval from the University of Waikato's ALPSS Human Research Ethics Committee. Additionally, we preregistered this study and its analysis plan on AsPredicted (see preregistration in Appendix C).

Participants

We aimed to recruit 2,000 participants, optimistically motivated by the large populations of teachers in New Zealand and Australia. Participants had to have been currently employed as an academic staff member.

To advertise the study in schools and unions, we composed an email that described the study, contained a link to the survey, and asked the recipient administrator to circulate our email to the relevant academic staff (see Appendix B for the school and union email templates). We sent these emails to secondary schools in New Zealand, and tertiary schools and relevant unions in New Zealand and Australia, using the email campaign feature of the premium GMail plug-in, GMass. For secondary schools, we emailed principals or, if their email address was not listed on their school's website, their assistant or the school's office. For universities, we emailed deans/heads of schools and directors of institutes, or the nearest equivalent listed on the university's website, given the diverse organisational structures and titles different universities employ. If no appropriate contact address was listed on a school's website, we sent the email via their website's general enquiry submission page. For unions, we emailed union presidents. We sent follow-up emails after the first, omitting anyone who had replied to the first agreeing or disagreeing to circulate our email. Recruitment and data collection took a little over two months, from June 25th to September 14th, 2023.

We attempted to recruit from senior secondary schools in Australia but were informed by some school administrators that we required additional approvals from their state or territory government before conducting our study in their jurisdiction. Some administrators circulated our email without verifying our approval status, and we have elected to retain the data collected from those schools. We have since applied for the necessary approvals but did not receive them in time for data collection.

In total, 631 participants began the survey. Of those, 463 completed all questions. We retained any response that was completed up to and including the I COPPE (our wellbeing measure, and the penultimate measure of the survey), as the relationship between unionisation and wellbeing was the primary concern of this thesis. Because there were only six respondents who left the survey after completing the I COPPE, and each did so at different stages of the AICS (our individualism-collectivism measure following the I COPPE), we replaced their missing AICS scores with series means for the analyses. We excluded all other incomplete responses.

We retained a total of 469 responses and made 169 exclusions. Complete demographic information is presented in Table 1. Despite the bureaucratic situation with Australia, we still collected a sufficient number of Australian responses for the by-country analyses. Given the high rate of unionisation in education and self-selected participation, we also collected a reasonable number of non-member responses for the by-membership analyses. Of the NZ participants, we had 217 members and 70 non-members. Of the Australian participants, we had 90 members and 92 non-members. Politically, 69.30% of the participants were left of the centre and 10.90% were right of it. Sixteen principals, deputy principals, or deans/heads of school participated even though the survey was explicitly intended for academic staff; in good faith, we assumed that these respondents had qualifying academic roles in addition to their administrative roles, and retained their responses.

Table 1

Demographics

Sample Characteristics	*n/M*	%/SD
Gender		
Men	177	37.7
Women	279	59.5
Gender-diverse	7	1.5
Something else	1	0.2
Prefer not to say	5	1.1
Age (years)	*M*=47.18	*SD*=12.04
Ethnicity		
NZ European	165	35.2
NZ Māori	18	3.8
AU European	84	17.9
AU Aboriginal	5	1.1
Samoan	2	0.43
Tongan	2	0.43
Niuean	2	0.43
Chinese	3	0.64
Indian	9	1.9
Other	166	35.4
Missing	13	2.8
Country		
New Zealand	287	61.2
Australia	182	38.8
Occupation		
Academic	237	50.5
Teacher	170	36.2
Researcher	27	5.8
Dean/head of school	8	1.7
Deputy principal	5	1.1
Principal	3	0.64
Other	19	4.1
Time working in education (years)	*M*=17.34	*SD*=10.87
Union membership		
Member	307	65.5
Non-Member	162	34.5
Union		
PPTA	125	40.7
TEU	87	28.3
AEU	6	2
NTEU	69	22.5
NSWTF	13	4.2
SSTUWA	4	1.3
QTU	3	1
Time spent as union member (years)	*M*=15.24	*SD*=11.80
Highest education level		
Degree	461	98.3
Diploma or certificate	7	1.5
Trade or technical qualification	1	0.2
Income		
Make enough to live comfortably	326	69.5
Make just enough to get by	129	27.5

Unable to make ends meet	7	1.5
Prefer not to say	7	1.5
Political orientation		
Far left	37	7.9
Left	168	35.8
Centre-Left	120	25.6
Centre	93	19.8
Centre-Right	36	7.7
Right	12	2.6
Far right	3	0.6

Note. PPTA = Post Primary Teacher's Association, TEU = Tertiary Education Union, AEU = Australian Education Union, NTEU = National Tertiary Education Union, NSWTF = New South Wales Teachers Federation, SSTUWA = State School Teachers' Union of West Australia, QTU = Queensland Teachers' Union

To see if those who completed the survey were noticeably different from those who did not, we considered the following demographics. Of the 75 incomplete responses that contained demographic information, 31 participants (41.33%) identified as men, 35 (46.67%) as women, 2 (2.67%) as gender-diverse, and 6 (8%) preferred not to say; 59 (78.67%) were from New Zealand and 16 (21.33%) from Australia; and 49 (65.33%) were members while 26 (34.67%) were not. Their ages ranged from 22 to 100; excluding the two 100-year-olds, whose responses were likely disingenuous, the real age range was 22 to 79 and the average age was 44. Of the members, 25 (51.02%) were members of the Post-Primary Teacher's Association, 10 (20.41%) were members of the Tertiary Education Union, 1 (2.04%) was a member of the Australian Education Union, 6 (12.24%) were members of the National Tertiary Education Union, 1 (2.04%) was a member of the State School Teachers' Union of Western Australia, and 6 (12.24%) left the survey before indicating which union they were a member of.

Design

This study employed a quasi-experimental design. The independent variables were country (New Zealand, Australia), union membership (member, non-member), and

participation level (casual member, dedicated member). We classified members as casual or dedicated based on their self-reported likelihood of participating in several given union activities in the next 12 months. The dependent variables were demographic information (gender, age, ethnicity, income); feelings about unions and their efficacy; motivations to unionise (members) or reasons for not unionising (non-members); past, present, future, and total global, interpersonal, community, occupational, physical, psychological, and economic wellbeing ratings; personality trait scores (HEXACO traits, altruism, neuroticism); authentic living, self-alienation, and accepting external influence scores; individualism (responsibility, uniqueness, competitiveness) and collectivism (advice-seeking, harmony, closeness) scores; and political orientation.

Measures

We used Qualtrics to collect data. The survey (available in full in Appendix A) used a combination of study-specific questions and previously developed measures to assess demographics, participation in and attitudes towards unions, personality characteristics, wellbeing, and sociopolitical characteristics. The union-related section was different between members (53 questions) and non-members (4 questions). In total, members answered 204 questions, and non-members answered 156. It took the average member 55 minutes and 12 seconds to complete the survey in a single sitting, and the average non-member 24 minutes and 58 seconds. Participants completed the measures in the order presented below.

Demographics

Participants were asked to report their gender, age, ethnicity, country of residence, political orientation, employment status, financial status, level of education, specific occupation, the age range of students they taught, and the number of years they had worked in the education sector. These were study-specific questions.

Union-Related Questions

Union Member Questions. First, we asked members to tell us which union they were a member of and, considering their entire career, how many years they had been a member of any union. This was followed by 51 questions taken from sections one ('participation in your union') and three ('general attitudes') of the untitled questionnaire created by Kelly and Kelly (1994). We did not include questions from sections two ('attitudes toward management and unions') or four ('background information') as their questions were not relevant to the research questions or the topics were covered by other measures.

Questions taken from section one of the Kelly and Kelly questionnaire asked participants to rate how likely they were to participate in their union in "easy" and "hard" ways in the next twelve months; how they felt about their union increasing its influence in their workplace; what they thought about being a "union activist"; how they thought other people would react to them becoming a union activist; and how much importance they placed on the reactions of those people. All ratings were made on 7-point Likert scales, with options 1 and 7 corresponding to different, question-appropriate statements, e.g., *not at all likely* and *extremely likely*, or *strongly disagree* and *strongly agree*.

Questions taken from section three of the Kelly and Kelly questionnaire asked participants to rate the degree to which they agreed with given attitude statements regarding unions, management, collective action, politics, and group membership. Agreement with a statement was rated on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Kelly and Kelly did not elaborate on the construction of their questionnaire, nor which items comprised which subscale, so the subscales that we report here were created by us matching items to the subscale names used in their paper; an exploratory factor analysis failed to yield logical factors, so we decided to rely on our own judgement. Kelly and Kelly did not reply when contacted for clarification about the structure of their measure.

The 10-item Union Participation scale featured six ‘easy’ union activities (e.g., “read a union journal or magazine) and four ‘hard’ union activities (e.g., “be a union delegate at a national meeting or conference”). It had a minimum score of 10 and a maximum score of 70. We used the sum of scores in the analyses. Kelly and Kelly reported acceptable internal reliability for this scale, which they treated as separate ‘easy’ and ‘hard’ subscales. Still, we do not report the alpha coefficients here because our usage of the scale differs from theirs.

The Group Identification subscale included six items that measured how strongly a participant identified with their union, and how much importance they placed on their membership. It had a minimum score of 6 and a maximum score of 42. Kelly and Kelly did not report an alpha coefficient for this subscale. The items comprising the Union Participation and Group Identification subscales as we have constructed them can be found in Appendix A.

Finally, we asked to what degree participants’ motivation to unionise was instrumental versus ideological, and whether unionisation had noticeably improved their working conditions and wellbeing. These were study-specific questions.

Non-Member Questions. We asked non-members four questions. Question 1 presented participants with a list of reasons why someone might not join a union and asked them to select those they identified with. We took most of the items on this list from a similar question asked in the New Zealand Worker Representation & Participation Survey (Haynes et al., 2003). Questions 2-4 were study-specific and asked participants whether they were pro-union, anti-union, or ambivalent towards unions; how likely they were to join a union if asked; and if unions had noticeably improved their working conditions and wellbeing despite not being a member themselves.

Personality Assessments

HEXACO-60. The HEXACO-60 was a 60-item abbreviation of the 100-item HEXACO-PI-R, developed by Ashton and Lee (2009). It included a series of self-descriptive

statements related to six dimensions of personality: Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness, and Openness to Experience. Agreement with a statement was rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Several of these statements were negatively phrased to reduce the occurrence of response bias. Each scale had a minimum score of 10 and a maximum score of 50. We used the sum of scores in the analyses.

We chose the HEXACO-60 because it would not have been feasible to administer the full-length HEXACO-PI-R given the length of the survey. The HEXACO-60 is widely used, having been translated into 37 languages, and it boasts good psychometric properties: Using a college sample, Ashton and Lee (2009) reported internal reliability coefficients of .79 for the Honesty-Humility scale, .78 for the Emotionality scale, .80 for the eXtraversion scale, .77 for the Agreeableness, .78 for the Conscientiousness scale, and .77 for the Openness to Experience scale.

HEXACO Interstitial Altruism Scale. During an update to the HEXACO proper, Ashton and Lee (2006) added the Interstitial Altruism (Versus Antagonism) Scale, a 4-item, facet-level scale that loaded onto multiple dimensions instead of one: Honesty-Humility, Agreeableness, and Emotionality. It included four self-descriptive statements related to altruism and antagonism. Agreement with a statement was rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Several of these statements were negatively phrased to reduce the occurrence of response bias. This scale had a minimum score of 4 and a maximum score of 20. We used the sum of scores in the analyses.

We included the Interstitial Altruism Scale because of the altruistic nature of organised labour. It had good psychometric properties in a self-report sample (Ashton & Lee, 2006), with an internal reliability coefficient of .74, and correlations of .54 with Honesty-Humility, .55 with Agreeableness, and .42 with Emotionality.

Goldberg's (1999) IPIP Representation of the NEO-PI-R Neuroticism Domain. Goldberg's (1999) 10-item International Personality Item Pool (IPIP) Representation of the NEO-PI-R Neuroticism Domain (henceforth called the IPIP Neuroticism Scale) was developed as part of the larger IPIP project. It was intended to correspond to the NEO-PI-R neuroticism scale developed by Costa and McCrae (1992). It included ten self-descriptive statements related to neuroticism. Agreement with a statement was rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); the original labels were "very inaccurate" and "very accurate" but, since we appended this scale to the HEXACO-60, we used the HEXACO-60 labels to keep the language of our scales consistent. Several of these statements were negatively phrased to reduce the occurrence of response bias. This scale had a minimum score of 8 and a maximum score of 40. We used the sum of scores in the analyses.

We chose to include a measure of neuroticism because the HEXACO has no direct measure for neuroticism, but previous research has shown a clear relationship between neuroticism and wellbeing. We chose the IPIP Neuroticism Scale because it was short, accessible, and—with an internal reliability coefficient of .86 (Goldberg, 1999)—it had good psychometric properties.

Authenticity Scale. The Authenticity Scale was a 12-item measure developed by Wood et al. (2008). It included twelve self-descriptive statements about authentic living, accepting external influence, and self-alienation. Agreement with a given statement was rated on a Likert scale ranging from 1 (*does not describe me at all*) to 7 (*describes me very well*). Each subscale had a minimum score of 4 and a maximum score of 28. However, to maximise Cronbach's alpha, we removed an item from the Authentic Living subscale (discussed in detail in the internal consistency reliability analyses section of our results), reducing its maximum score to 21. We used the sum of scores in the analyses.

We chose the Authenticity Scale because it was designed according to the person-centred tripartite model of authenticity, as described by Wood et al. (2008). It was also an appropriate length for the survey. In Wood et al.'s (2008) largest sample, Cronbach's alpha was reported as .79 for the Authentic Living subscale, .77 for the Accepting External Influence subscale, and .82 for the Self-Alienation subscale, indicating the Authenticity Scale has good psychometric properties.

Wellbeing Assessment

I COPPE Scale. The I COPPE Scale was a 21-item measure developed by Prilleltensky et al. (2015). It asked participants to rate their present, past, and projected wellbeing from 0-10 on seven dimensions: Overall Life (which we will call Global), Interpersonal, Community, Occupational, Physical, Psychological, and Economic. For each dimension, participants were asked to consider their current wellbeing, their wellbeing a year ago, and what they thought their wellbeing would be in a year's time. It was intended that, for each of the seven wellbeing dimensions, the past, present, and future scores be averaged to create a total wellbeing score. We used these total scores in the main analyses, but we also used the past, present, and future scores in exploratory analyses.

The I COPPE used a rephrased Cantril Ladder—a measure featured in the OECD Guidelines on Measuring Subjective Wellbeing and the Gallup World Poll (Organisation for Economic Co-operation and Development, 2013)—to measure global wellbeing, and adapted it to measure the six domains. Participants were told the bottom of the ladder (0) was "the worst your life can be" and the top (10) was "the best your life can be" when thinking about their quality of life overall or in a given domain.

When looking for a well-established, relatively modern wellbeing measure, we consulted Linton et al.'s (2016) review of 99 self-report wellbeing measures. Of those featured, we chose the I COPPE Scale for its unique combination of breadth and brevity: Its

inclusion covered global wellbeing and the six wellbeing domains relevant to working and union contexts without bloating the survey. Furthermore, it measures wellbeing over a two-year period. Because the relationship between unionisation and wellbeing is likely to change over time, be it on a smaller scale (during periods of high vs. low union activity) or a larger scale (as laws and cultural standards relevant to work and organised labour change), the I COPPE's past, present, and future measurements seemed an apposite first step in addressing this gap in the literature. Additionally, the I COPPE uses the Cantril Ladder, relating to the research conducted by Blanchflower and Bryson (2020) that showed a positive relationship between membership and higher scores on the Cantril Ladder.

Though Prilleltensky et al. (2015) did not report the internal reliability of the I COPPE, Di Martino et al. (2018) reported the composite reliabilities of the seven scales from their Italian translation, which ranged from .70 to .86, indicating the I COPPE has good psychometric properties.

Sociopolitical Assessment

Auckland Individualism-Collectivism Scale. The Auckland Individualism-Collectivism Scale (AICS) was a 20-item measure developed by Shulruf et al. (2007). It asked participants to rate the frequency with which they experienced or acted on certain attitudes, values, and beliefs related to individualism (with dimensions of responsibility, uniqueness, and competitiveness) and collectivism (with dimensions of advice-seeking and harmony). Agreement with a given statement was rated on a Likert scale ranging from 1 (*never or almost never*) to 6 (*always*). We used the sum of scores in the analyses.

We chose the AICS because it was developed to address criticisms of previously developed measures, its design was informed by Oyserman et al.'s (2002) thorough meta-analysis of the individualism-collectivism literature, and its use has recently been validated in a variety of cultural contexts (Affum-Osei et al., 2019). Additionally, it was developed in

New Zealand and first validated with an NZ population, making it particularly suitable for use in an NZ context. Shulruff et al. (2007) reported Cronbach's alphas of .73 for the Responsibility subscale, .76 for the Unique subscale, .78 for the Competitiveness subscale, .77 for the Advice subscale, and .71 for the Harmony subscale, indicating the AICS has good psychometric properties.

We decided to administer some of the items that were removed from the final version of the AICS, including those comprising the Closeness subscale—the closeness factor having been omitted from the AICS for failing to load on its final structural model—because we felt they may be pertinent to study. The 30-item version of the AICS is available with the rest of the survey materials in Appendix A. After performing scale reliability analyses, we winnowed these 30 items to maximise the internal reliability of our measure (see Appendix A for the final set of items we used in the analyses). Ultimately, the minimum and maximum scores for the subscales were as follows: 4 to 24 for Responsibility (four items, after removing two), 2 to 12 for Unique (two items, after removing two), 4 to 24 for Competitiveness (four items), 2 to 12 for Advice (two items, after removing two), 6 to 36 for Harmony (six items), and 5 to 30 for Closeness (five items, after removing one).

Procedure

We hosted our anonymous online survey on Qualtrics. As described above, we recruited participants by advertising our study in emails sent to relevant school administrators and union presidents in New Zealand and Australia. These emails contained a link to the study. When clicked, participants were taken to a page detailing the nature and purpose of the study; the anonymity of their data, the retention period of their data, and their right to withdraw or stop at any time; their ability to provide their email upon completion of the survey, entering into a prize draw and/or requesting a summary of the study's results; our ethics approval; and who to contact in case of questions. After providing their informed

consent by clicking a checkbox on the following page, they were taken to the survey. All instructions necessary to answer the questions accurately were provided. All questions were forced response, meaning participants had to answer every question on a page before they could progress to the next page. However, if a participant left the survey early, Qualtrics still saved their incomplete response. Upon completing the survey, participants were given the option to click a link that would take them to a second survey, where they could provide their email and indicate whether they wanted to go in the draw to win a 50 NZD or AUD digital Prezzy (NZ)/Prezzee (AU) card and/or to receive a summary of results once the study was finished. This was done in a second survey so participants' emails could not be linked to their responses in the first survey.

Data Analysis

We imported the Qualtrics data into SPSS (version 29) to conduct the statistical analyses. Our main analyses were included in our preregistration, but we also performed several exploratory analyses.

Internal Consistency Reliability Analyses

Before beginning the analyses proper, we performed a series of internal consistency reliability analyses to verify the validity of our scales based on our data.

Descriptive Statistics

We calculated descriptive statistics to obtain frequencies, means, standard deviations, skewness, and kurtosis. Skewness and kurtosis are used as indicators of univariate normality, with values of skewness exceeding +/-3 and values of kurtosis exceeding +/-10 suggesting a non-normal distribution (Kline, 2011). The data fell well within the acceptable ranges and we could perform our preregistered analyses. We also classified members as casual or dedicated by performing a median split of scores on the Union Participation subscale (members below the median were casual and members above it were dedicated).

Examining the Relationship Between Union Membership and Wellbeing

To determine the extent to which wellbeing differed between members and non-members, and casual and dedicated members, in New Zealand and Australia (Q1A), we conducted a series of two-way ANOVAs comparing the total wellbeing scores from the I COPPE between NZ and Australian members and non-members, and NZ and Australian casual and dedicated members. We also conducted some exploratory analyses using two-way ANOVAs comparing past, present, and future I COPPE scores between NZ and Australian members and non-members, and NZ and Australian casual and dedicated members.

ANOVA assumes that the variance of independent variables is homogenous. Levene's test is used to determine whether this is the case, with a statistically significant Levene's statistic indicating that a dependent variable has a heterogenous variance. All of our dependent variables had statistically non-significant Levene's statistics, meaning the assumption was satisfied.

To determine the extent to which perceptions of union efficacy differed between members and non-members, and casual and dedicated members, in New Zealand and Australia (Q1B), we performed two chi-squares comparing frequencies of perceived efficacy between members and non-members, and casual and dedicated members. Perceptions of union efficacy (whether unions have materially improved working conditions and wellbeing) were divided into four groups: those who felt unions had improved both their wellbeing and working conditions and vice versa, and those who felt unions had improved their wellbeing but not their working conditions and vice versa. The first chi-square compared members and non-members, and the second compared casual and dedicated members, with both using country as a layer variable. We then performed two more chi-squares. The first compared perceptions of union efficacy between New Zealanders and Australians, using membership as a layer variable. The second compared perceptions of union efficacy between casual and

dedicated members, using country as a layer variable. These analyses deviated from our preregistration, which said we would conduct two-way ANOVAs. During analysis, we realised a chi-square was the most appropriate approach due to the nature of the data.

Identifying Predictors of Union Membership From Individual Differences

To determine the extent to which the average scores on our measures of personality and sociopolitical characteristics differed between members and non-members, and casual and dedicated members, in New Zealand and Australia (Q2A), we conducted a series of hierarchical logistic regressions: one comparing members and non-members in New Zealand, one comparing members and non-members in Australia, one comparing casual and dedicated members in New Zealand, and one comparing casual and dedicated members in Australia. Union membership (member/non-member) was the outcome variable and demographics (age, gender, ethnicity, and income), political orientation, AICS scores, personality traits (HEXACO-60 scores, Interstitial Altruism Scale scores, IPIP Neuroticism Scale scores), and Authenticity Scale scores were the predictor variables, inserted into the model as four steps in that order. Based on previous research and statistical reasoning, we believed sociopolitical characteristics would be more prevalent predictors of membership and have greater explanatory power than personality characteristics. We inserted political orientation before individualism-collectivism because, in an individualistic society, it seemed likely that a broader tendency towards left-wing politics would be more predictive of membership than narrower tendencies towards individualistic-collectivistic orientations. Finally, we inserted personality traits before authenticity because the existing literature suggests a significant relationship between unionisation and certain personality traits.

In all four regressions, man was the reference group for the gender variables, and "I make enough money to live comfortably" was the reference group for the lower income variable. In the two NZ regressions, NZ European was the reference group for the NZ

ethnicity variables, and in the two Australian regressions, AU European was the reference group for the AU ethnicity variables.

Following the instructions of Field (2018), we also conducted a linear regression with the same outcome and predictor variables to assess their multi-collinearity, as SPSS does not provide this information for logistic regressions. Logistic regression assumes that independent variables are not collinear, lest they inflate the variance of, and produce inaccurate *p* values for, model coefficients. Tolerance values less than 0.1 and VIF values greater than 10 are used as indicators of multicollinearity (Field, 2018). All of our variables had tolerance and VIF values within these limits, meaning the assumption was satisfied.

To determine to what extent motivations to unionise differed between casual and dedicated members in New Zealand and Australia (Q2B), we performed two chi-squares. The first compared frequencies of motivations between casual and dedicated members, using country as a layer variable. The second compared frequencies of motivations to unionise between New Zealanders and Australians, using participation level as a layer variable. To determine to what extent reasons for not unionising differed between non-members in New Zealand and Australia (Q2C), we calculated *Z*-scores comparing frequencies of reasons for not unionising between NZ and Australian members and non-members. We pre-registered these analyses as *t*-tests, but realised in the course of analysis that, due to the nature of the data, chi-squares and *Z*-scores were the appropriate methods.

To further characterise members, we conducted a series of two-way ANOVAs comparing the responses of NZ and Australian casual and dedicated members to select questions from the Kelly and Kelly questionnaire related to the influence of unions in the workplace, the effect of participation in unions, and union activism. To further characterise non-members, we calculated *Z*-scores to compare NZ and Australian non-members' feelings

towards unions and their likelihood of unionising. Again, these analyses were erroneously pre-registered as *t*-tests.

Predicting Global Wellbeing From Individual Differences and Unionisation

To determine the extent to which unionisation could predict the global wellbeing of NZ and Australian academic staff over and above demographics, personality, and sociopolitical characteristics, we conducted a hierarchical linear regression. Total global wellbeing was the outcome variable and demographic characteristics (gender, age, ethnicity, income), personality traits (HEXACO-60 scores, Interstitial Altruism Scale scores, IPIP Neuroticism scores), Authenticity Scale scores, AICS scores, political orientation, and union membership were the predictor variables, inserted into the model as six steps in that order. To clarify union membership's contribution to the model's explanation of variance in total global wellbeing, we reran the regression with union membership as the first step, rather than the last. Based on previous research, we believed that the first five steps would account for proportions of variance in global wellbeing in descending order. Membership was inserted last because we wanted to see what proportion of variance in global wellbeing it accounted for over and above the other predictors.

In this regression, man was the reference group for the gender variables, European (comprised of the NZ European and AU European groups) was the reference group for the ethnicity variables, and "I make enough money to live comfortably" was the reference group for the lower income variable.

Linear regression assumes that independent variables are not collinear. All of our independent variables had tolerance values greater than 0.1 and VIF values less than 10, indicating they were not collinear and the assumption was satisfied. Linear regression also assumes homogeneity of variance, which is tested visually using a scatterplot of residuals. Our data showed no obvious pattern on the scatterplot, meaning the assumption was satisfied.

Results

Internal Consistency Reliability Analyses

Briggs and Cheek (1986) suggest that scales with $\alpha < .7$ are unreliable. Previous studies reported that our scales of choice had $\alpha \geq .7$, indicating good psychometric properties. The results of our reliability analyses, shown in Table 2, were similar, supporting the validity of these measures. Even so, in some cases, we removed one or more items from some scales to maximise their Cronbach's alpha.

Unfortunately, for the Interstitial Altruism Scale, this sample produced an alpha coefficient of .52, indicating poor psychometric properties. We elected to use this scale in the analyses despite its seemingly poor internal reliability because it was our sole measure of a theoretically important construct, and it has demonstrated good psychometric properties in previous studies. Even so, we interpret the relevant results with due caution. The AICS Responsibility and Harmony subscales were also lower than is desirable, but not so low as to be overly concerning.

Table 2

Results of Internal Consistency Reliability Analyses

Scale	Cronbach's Alpha
(Kelly & Kelly) Union Participation	.88
(Kelly & Kelly) Group Identification	.88
(HEXACO-60) Honesty-Humility	.73
(HEXACO-60) Emotionality	.78
(HEXACO-60) eXtraversion	.77
(HEXACO-60) Agreeableness	.79
(HEXACO-60) Conscientiousness	.78
(HEXACO-60) Openness to Experience	.75
Interstitial Altruism Scale	.52
IPIP Neuroticism Scale	.87
(Authenticity Scale) Authentic Living	.86
(Authenticity Scale) Accepting External Influence	.79
(Authenticity Scale) Self-Alienation	.89
(I COPPE) Total global wellbeing	.79

(I COPPE) Total interpersonal wellbeing	.90
(I COPPE) Total community wellbeing	.94
(I COPPE) Total occupational wellbeing	.82
(I COPPE) Total physical wellbeing	.82
(I COPPE) Total psychological wellbeing	.81
(I COPPE) Total economic wellbeing	.87
(AICS) Responsibility	.64
(AICS) Unique	.83
(AICS) Competitiveness	.78
(AICS) Advice	.78
(AICS) Harmony	.67
(AICS) Closeness	.70

Determining Participation Level, and Average Responses to the Personality, Sociopolitical, and Wellbeing Measures

To classify members as casual or dedicated, we performed a median split of their total scores on the Union Participation subscale, where a total score of 10 was the minimum likelihood that the participant would participate in any union activities in the next 12 months, and 70 was the maximum likelihood. This sample's median score was 39, with anyone scoring below assigned to the casual group, and anyone scoring above assigned to the dedicated group. To theoretically support this grouping method, we performed a one-way ANOVA comparing scores on the Group Identification subscale between casual and dedicated members. Casual and dedicated members had Group Identification mean scores of 23.80 and 32.50, respectively. A one-way ANOVA showed that this difference was statistically significant with a very large effect [$F(1, 305) = 135.73$, $p < .01$, $\eta^2 = .31$], suggesting the grouping method was appropriate.

Table 3 presents the means and standard deviations for the personality, sociopolitical, and wellbeing measures for New Zealanders and Australians, members and non-members, and casual and dedicated members.

Considering personality characteristics, the range of average scores between all six groups on the Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness, Openness to Experience, Altruism, and Accepting External Influence

(sub)scales were close to those (sub)scales' midpoints. The range of average IPIP Neuroticism Scale scores was close to the scale's third quarter. The range of average Authentic Living scores was close to the subscale's maximum, and the range of average Self-Alienation scores approached the subscale's first quarter.

Considering sociopolitical characteristics, the average scores of all six groups on the political spectrum were below 4, meaning each group was left of the centre. Average Competitiveness, Unique, Advice, and Closeness scores were close to but slightly higher than the subscales' midpoints. The range of average Responsibility scores reached the subscale's third quarter, and the range of average Harmony scores fell between the subscale's midpoint and third quarter.

Considering total global and domain-specific wellbeing, the range of average scores between all six groups fell between the midpoint and third quarter of maximum scores for total wellbeing (10). While we cannot say whether these scores are high or low relative to normative population data, they are higher than average given the internal logic of the I COPPE scale, wherein 0 is "the worst your life can be" and 10 is "the best your life can be," making 5.5 'average wellbeing.'

Table 3

Descriptive Statistics for the Personality, Sociopolitical, and Wellbeing Measures by Country, Membership, and Participation Level

Variables	Country *M* (*SD*)		Union membership *M* (*SD*)		Participation level *M* (*SD*)	
	NZ (*n* = 287)	AU (*n* = 182)	Member (*n* = 307)	Non-member (n = 162)	Casual (*n* = 152)	Dedicated (*n* = 155)
(HEXACO-60) Honesty-Humility	26.83 (3.17)	26.07 (2.76)	26.61 (3.07)	27.14 (3.33)	26.53 (2.91)	26.68 (3.23)
(HEXACO-60) Emotionality	30.18 (3.04)	28.88 (2.99)	29.80 (3.08)	29.99 (3.10)	28.89 (3.02)	29.72 (3.15)
(HEXACO-60) eXtraversion	30.23 (2.87)	29.19 (2.94)	29.60 (2.93)	29.08 (2.85)	29.78 (3.00)	30.07 (2.86)
(HEXACO-60) Agreeableness vs. Anger	29.79 (3.20)	29.03 (4.00)	29.57 (3.47)	29.26 (3.39)	29.55 (3.33)	29.59 (3.61)
(HEXACO-60) Conscientiousness	28.13 (3.05)	27.68 (3.23)	28.00 (3.11)	27.63 (2.87)	28.20 (3.02)	27.80 (3.19)
(HEXACO-60) Openness to Experience	29.73 (2.50)	29.50 (2.25)	29.66 (2.43)	29.65 (2.58)	29.34 (2.56)	29.98 (2.27)
Interstitial Altruism Scale	11.38 (1.59)	11.60 (1.59)	11.44 (1.59)	11.56 (1.59)	11.28 (1.62)	11.60 (1.55)
IPIP Neuroticism Scale	27.68 (2.81)	27.63 (2.57)	27.66 (2.74)	27.64 (2.50)	27.56 (2.82)	27.77 (2.65)
(Authenticity Scale) Authentic Living	17.57 (2.42)	17.87 (2.40)	17.65 (2.42)	17.26 (2.55)	17.46 (2.36)	17.85 (2.46)
(Authenticity Scale) Accepting External Influence	13.65 (4.31)	12.73 (4.20)	13.38 (4.29)	13.22 (4.22)	13.53 (4.46)	13.23 (4.13)
(Authenticity Scale) Self-Alienation	8.82 (4.59)	8.92 (5.32)	8.85 (4.80)	8.52 (4.29)	9.34 (5.09)	8.37 (4.45)
Political orientation	2.81 (1.19)	2.59 (1.20)	2.75 (1.19)	3.30 (1.22)	2.90 (1.25)	2.59 (1.12)
(AICS) Competitiveness	11.93 (3.93)	10.31 (3.75)	11.45 (3.94)	12.76 (4.31)	11.50 (4.12)	11.41 (3.77)
(AICS) Unique	8.29 (2.17)	7.90 (2.31)	8.18 (2.22)	8.27 (2.28)	8.19 (2.09)	8.17 (2.34)
(AICS) Responsibility	17.81 (2.77)	18.26 (3.06)	17.94 (2.86)	18.64 (2.91)	18.14 (3.05)	17.75 (2.65)
(AICS) Advice	8.16 (2.76)	7.72 (2.82)	8.03 (2.78)	7.27 (3.11)	7.84 (2.80)	8.21 (2.76)
(AICS) Harmony	23.63 (4.08)	22.80 (4.18)	23.39 (4.12)	23.27 (4.16)	23.31 (4.01)	23.46 (4.23)
(AICS) Closeness	19.58 (3.98)	19.50 (4.10)	19.55 (4.01)	18.27 (4.01)	19.09 (4.08)	20.01 (3.90)
(I COPPE) Total global wellbeing	7.25 (1.14)	7.17 (1.35)	7.23 (1.20)	7.30 (1.41)	7.29 (1.11)	7.17 (1.29)
(I COPPE) Total interpersonal wellbeing	7.88 (1.30)	8.02 (1.35)	7.92 (1.31)	7.95 (1.55)	7.95 (1.34)	7.89 (1.29)
(I COPPE) Total community wellbeing	7.18 (1.54)	6.99 (1.80)	7.12 (1.62)	7.15 (1.82)	7.14 (1.47)	7.11 (1.76)
(I COPPE) Total occupational wellbeing	7.25 (1.37)	7.05 (1.45)	7.19 (1.40)	7.28 (1.65)	7.30 (1.32)	7.09 (1.46)
(I COPPE) Total physical wellbeing	6.98 (1.53)	6.97 (1.45)	6.98 (1.51)	7.00 (1.49)	7.11 (1.42)	6.85 (1.58)
(I COPPE) Total psychological wellbeing	7.19 (1.43)	6.83 (1.66)	7.08 (1.50)	7.21 (1.56)	7.13 (1.48)	7.03 (1.53)
(I COPPE) Total economic wellbeing	7.15 (1.46)	7.41 (1.50)	7.23 (1.47)	7.51 (1.54)	7.35 (1.39)	7.11 (1.54)

Examining the Relationship Between Union Membership and Wellbeing

To answer Question 1A, we conducted one set of two-way ANOVAs to compare total I COPPE scores between NZ and Australian members and non-members (Table 4), and a second set of two-way ANOVAs to compare total I COPPE scores between NZ and Australian casual and dedicated members (Table 5).

As shown in Table 4, there were no statistically significant differences in any wellbeing domain between members and non-members generally, nor NZ and Australian members and non-members specifically. In the country comparison, we observed a single statistically significant effect on total interpersonal wellbeing: Australians tended to rate their interpersonal wellbeing higher than New Zealanders. The effect size was small.

As shown in Table 5, there were no statistically significant differences in any wellbeing domain between New Zealanders and Australians, casual and dedicated members generally, nor NZ and Australian casual and dedicated members specifically. Because there was only a statistically significant effect of country on total interpersonal wellbeing when we compared members and non-members, but not casual and dedicated members, it suggests that the difference in interpersonal wellbeing between New Zealanders and Australians was due to non-members.

Table 4

Results of Two-Way ANOVAs Comparing Total I COPPE Scores Between New Zealanders/Australians and Union Members/Non-Members

Wellbeing (df = 3, 465)	Country M (SD)		Union membership M (SD)		Two way ANOVA		
	NZ (n = 287)	AU (n = 182)	Member (n = 307)	Non-Member (n = 162)	Country (F, p, η_p^2)	Union membership (F, p, η_p^2)	Country x union membership (F, p, η_p^2)
Global	7.26 (1.23)	7.25 (1.35)	7.23 (1.20)	7.30 (1.41)	F = 0.00, p = .98, η_p^2 < .01	F = 0.42, p = .52, η_p^2 < .01	F = 0.34, p = .56, η_p^2 < .01
Interpersonal	7.83 (1.36)	8.09 (1.45)	7.92 (1.31)	7.95 (1.55)	F = 5.26, p = .02, η_p^2 = .01*	F = 0.07, p = .79, η_p^2 < .01	F = 1.75, p = .19, η_p^2 < .01
Community	7.17 (1.58)	7.08 (1.86)	7.12 (1.62)	7.15 (1.82)	F = 0.19, p = .66, η_p^2 < .01	F = 0.14, p = .71, η_p^2 < .01	F = 0.47, p = .50, η_p^2 < .01
Occupational	7.24 (1.44)	7.19 (1.57)	7.19 (1.40)	7.28 (1.65)	F = 0.09, p = .76, η_p^2 < .01	F = 0.60, p = .44, η_p^2 < .01	F = 1.05, p = .31, η_p^2 < .01
Physical	6.99 (1.52)	6.97 (1.47)	6.98 (1.51)	7.00 (1.49)	F = 0.07, p = .79, η_p^2 < .01	F = 0.03, p = .86, η_p^2 < .01	F = 0.06, p = .80, η_p^2 < .01
Psychological	7.17 (1.47)	7.05 (1.60)	7.08 (1.50)	7.21 (1.56)	F= 0.47, p=.49, η_p^2 < .01	F = 1.56, p = .21, η_p^2 < .01	F = 2.80, p = .10, η_p^2 = .01
Economic	7.23 (1.43)	7.47 (1.60)	7.23 (1.47)	7.51 (1.54)	F = 1.08, p = .30, η_p^2 < .01	F = 2.24, p = .14, η_p^2 = .01	F = 0.41, p = .52, η_p^2 < .01

* p < .05.

Table 5

Results of Two-Way ANOVAs Comparing Total I COPPE Scores Between New Zealanders/Australians and Casual/Dedicated Members

Wellbeing (df = 3, 303)	Country M (SD)		Participation level M (SD)		Two way ANOVA		
	NZ (n = 217)	AU (n = 90)	Casual (n = 152)	Dedicated (n = 155)	Country (F, p, η_p^2)	Participation level (F, p, η_p^2)	Country x participation level (F, p, η_p^2)
Global	7.25 (1.14)	7.17 (1.35)	7.29 (1.11)	7.17 (1.29)	F = 0.31, p = .58, η_p^2 < .01	F = 1.75, p = .19, η_p^2 = .01	F = 1.50, p = .22, η_p^2 = .01
Interpersonal	7.88 (1.30)	8.02 (1.35)	7.95 (1.34)	7.89 (1.29)	F = 0.66, p = .42, η_p^2 < .01	F = 0.82, p = .37, η_p^2 < .01	F = 1.67, p = .20, η_p^2 = .01
Community	7.18 (1.54)	6.99 (1.80)	7.14 (1.47)	7.11 (1.76)	F = 0.90, p = .34, η_p^2 < .01	F = 0.03, p = .87, η_p^2 < .01	F = 0.01, p = .93, η_p^2 < .01
Occupational	7.25 (1.37)	7.05 (1.45)	7.30 (1.32)	7.09 (1.46)	F = 1.39, p = .24, η_p^2 = .01	F = 2.27, p = .13, η_p^2 = .01	F = 0.60, p = .44, η_p^2 < .01
Physical	6.98 (1.53)	6.97 (1.45)	7.11 (1.42)	6.85 (1.58)	F = 0.00, p = .97, η_p^2 < .01	F = 1.32, p = .25, η_p^2 < .01	F = 0.31, p = .58, η_p^2 < .01
Psychological	7.19 (1.43)	6.83 (1.66)	7.13 (1.48)	7.03 (1.53)	F = 3.79, p = .05, η_p^2 = .01	F = 0.51, p = .48, η_p^2 < .01	F = 0.15, p = .70, η_p^2 < .01
Economic	7.15 (1.46)	7.41 (1.50)	7.35 (1.39)	7.11 (1.54)	F = 1.81, p = .18, η_p^2 = .01	F = 2.37, p = .13, η_p^2 = .01	F = 0.49, p = .49, η_p^2 < .01

We also conducted several exploratory two-way ANOVAs, with one set comparing past, present, and future I COPPE scores between NZ and Australian members and non-members (Table 6), and a second set comparing past, present, and future I COPPE scores between NZ and Australian casual and dedicated members (Table 7). We see a handful of union-related, statistically significant differences in wellbeing emerge when analysed at this more granular, temporal level. While they are reported in Tables 6 and 7, we do not discuss statistically significant country effects here because they are unrelated to unionisation.

As shown in Table 6, we did observe one union membership effect and two country x membership effects. First, NZ and Australian members tended to rate their future economic wellbeing lower than non-members. Second, NZ members tended to rate their present and future psychological wellbeing (M = 7.22, SD = 1.59; M = 7.81, SD = 1.48) higher than Australian members (M = 6.78, SD = 2.00; M = 7.61, SD = 1.40). Conversely, Australian non-members tended to rate their present and future psychological wellbeing (M = 7.41, SD = 1.61; M = 8.03, SD = 1.53) higher than NZ non-members (M = 7.16, SD = 1.75; M = 7.57, SD = 1.67). The sizes of all three effects were small.

As shown in Table 7, we did observe one country x participation level effect: Dedicated NZ members tended to rate their future global wellbeing (M = 7.99, SD = 1.18) higher than dedicated Australian members (M = 7.59, SD = 1.74). Conversely, casual Australian members tended to rate their future global wellbeing (M = 8.07, SD = 1.12) higher than casual NZ members (M = 7.67, SD = 1.39). The effect size was small.

It seems that the wellbeing of academic staff—be it global or domain-specific—did not meaningfully differ between members and non-members, nor casual and dedicated members, regardless of country. Even when accounting for the differences in economic, psychological, and global wellbeing seen at different time points, those differences were,

functionally, quite small—less than a full point in each of the four cases, with small effect sizes.

Table 6

Results of Two-Way ANOVAs Comparing I COPPE Scores at Different Time Points Between New Zealanders/Australians and Union Members/Non-Members

Wellbeing (df = 3, 465)	Country M (SD)		Union membership M (SD)		Two way ANOVA		
	NZ (n = 287)	AU (n = 182)	Member (n = 307)	Non-Member (n = 162)	Country (F, p, η_p^2)	Union membership (F, p, η_p^2)	Country x union membership (F, p, η_p^2)
Global							
Past	6.75 (1.71)	6.48 (1.88)	6.63 (1.73)	6.67 (1.87)	F = 3.18, p = .08, η_p^2 = .01	F = 0.40, p = .53, η_p^2 < .01	F = 0.26, p = .61, η_p^2 < .01
Present	7.23 (1.35)	7.32 (1.41)	7.23 (1.26)	7.34 (1.53)	F = 0.56, p = .56, η_p^2 < .01	F = 0.54, p = .47, η_p^2 < .01	F = 0.41, p = .52, η_p^2 < .01
Future	7.79 (1.39)	7.97 (1.39)	7.83 (1.35)	7.90 (1.49)	F = 2.60, p = .11, η_p^2 = .01	F = 0.07, p = .80, η_p^2 < .01	F = 2.62, p = .11, η_p^2 = .01
Interpersonal							
Past	7.48 (1.62)	7.75 (1.76)	7.59 (1.56)	7.57 (1.89)	F = 3.20, p = .07, η_p^2 = .01	F = 0.36, p = .55, η_p^2 < .01	F = 0.06, p = .80, η_p^2 < .01
Present	7.82 (1.49)	8.09 (1.64)	7.90 (1.46)	7.96 (1.69)	F = 4.82, p = .03, η_p^2= .01*	F = 0.00, p = .96, η_p^2 < .01	F = 3.67, p = .06, η_p^2 = .01
Future	8.18 (1.31)	8.45 (1.43)	8.27 (1.26)	8.31 (1.55)	F = 5.59, p = .02, η_p^2 = .01*	F = 0.02, p = .88, η_p^2 < .01	F = 2.56, p = .11, η_p^2 = .01
Community							
Past	6.98 (1.70)	6.84 (2.05)	6.88 (1.80)	7.01 (1.91)	F = .66, p = .42, η_p^2 <. 01	F = 1.18, p = .28, η_p^2 < .01	F = 1.13, p = .29, η_p^2 < .01
Present	7.13 (1.66)	7.04 (1.98)	7.11 (1.72)	7.06 (1.92)	F = 0.09, p = .76, η_p^2 <. 01	F = 0.01, p = .93, η_p^2 < .01	F = 0.39, p = .53, η_p^2 < .01
Future	7.40 (1.64)	7.37 (1.89)	7.39 (1.67)	7.38 (1.87)	F = 0.01, p = .91, η_p^2 <. 01	F = 0.00, p = .97, η_p^2 < .01	F = 0.05, p = .82, η_p^2< .01
Occupational							
Past	6.93 (1.79)	6.61 (2.03)	6.82 (1.84)	6.78 (1.98)	F = 2.34, p = .13, η_p^2 = .01	F = 0.15, p = .70, η_p^2 < .01	F = 0.98, p = .32, η_p^2 < .01
Present	7.22 (1.62)	7.29 (1.74)	7.18 (1.58)	7.38 (1.80)	F = 0.18, p = .67, η_p^2< .01	F = 1.53, p = .22, η_p^2 <. 01	F = 1.63, p = .20, η_p^2 < .01
Future	7.58 (1.64)	7.66 (1.67)	7.58 (1.54)	7.67 (1.84)	F = 0.25, p = .62, η_p^2 < .01	F = 0.17, p = .68, η_p^2 < .01	F = 0.13, p = .72, η_p^2 < .01
Physical							
Past	6.56 (1.95)	6.46 (1.91)	6.52 (1.91)	6.52 (1.99)	F = 0.67, p = .41, η_p^2 < .01	F = 0.00, p = .95, η_p^2 < .01	F = 1.14, p = .29, η_p^2 < .01
Present	6.79 (1.74)	6.73 (1.76)	6.75 (1.73)	6.79 (1.80)	F = 0.33, p = .56, η_p^2 < .01	F = 0.09, p = .76, η_p^2 < .01	F = 0.26, p = .61, η_p^2 < .01
Future	7.63 (1.56)	7.73 (1.51)	7.65 (1.51)	7.69 (1.60)	F = 0.81, p = .37, η_p^2 < .01	F = 0.01, p = .91, η_p^2 < .01	F = 1.42, p = .23, η_p^2 < .01
Psychological							
Past	6.56 (2.02)	6.24 (2.24)	6.41 (2.09)	6.49 (2.16)	F = 2.79, p = .10, η_p^2= .01	F = 0.86, p = .36, η_p^2 < .01	F = 0.19, p = .66, η_p^2 < .01
Present	7.21 (1.63)	7.10 (1.83)	7.09 (1.73)	7.30 (1.67)	F = 0.30, p = .59, η_p^2 < .01	F = 2.76, p = .10, η_p^2 = .01	F = 4.13, p= .04, η_p^2 = .01*
Future	7.75 (1.53)	7.82 (1.48)	7.75 (1.46)	7.83 (1.61)	F = 0.76, p = .38, η_p^2 < .01	F = 0.37, p = .54, η_p^2 < .01	F = 4.64, p = .03, η_p^2 = .01*
Economic							
Past	7.05 (1.64)	7.30 (1.87)	7.08 (1.72)	7.27 (1.76)	F = 1.00, p = .32, η_p^2 < .01	F = 0.40, p = .53, η_p^2 < .01	F = 0.84, p = .36, η_p^2 < .01

Present	7.16 (1.62)	7.40 (1.74)	7.17 (1.66)	7.41 (1.69)	$F = 0.83$, $p = .36$, $\eta_p^2 < .01$	$F = 1.23$, $p = .27$, $\eta_p^2 < .01$	$F = 0.59$, $p = .44$, $\eta_p^2 < .01$
Future	7.48 (1.58)	7.73 (1.74)	7.43 (1.64)	7.85 (1.63)	$F = 0.73$, $p = .39$, $\eta_p^2 < .01$	$F = 5.28$, $p = .02$, $\eta_p^2 = .01$*	$F = 0.00$, $p = 1.00$, $\eta_p^2 < .01$

* $p < .05$.

Table 7

Results of Two-Way ANOVAs Comparing I COPPE Scores at Different Time Points Between New Zealanders/Australians and Casual/Dedicated Union Members

Wellbeing ($df = 3, 303$)	Country M (SD)		Participation level M (SD)		Two way ANOVA		
	NZ ($n = 217$)	AU ($n = 90$)	Casual ($n = 152$)	Dedicated ($n = 155$)	Country (F, p, η_p^2)	Participation level (F, p, η_p^2)	Country x participation level (F, p, η_p^2)
Global							
Past	6.70 (1.70)	6.47 (1.80)	6.80 (1.67)	6.46 (1.77)	$F = 1.20$, $p = .27$, $\eta_p^2 < .01$	$F = 2.80$, $p = .10$, $\eta_p^2 = .01$	$F = 0.08$, $p = .77$, $\eta_p^2 < .01$
Present	7.23 (1.26)	7.22 (1.34)	7.29 (1.19)	7.17 (1.36)	$F = 0.01$, $p = .94$, $\eta_p^2 < .01$	$F = 1.01$, $p = .32$, $\eta_p^2 < .01$	$F = 0.35$, $p = .55$, $\eta_p^2 < .01$
Future	7.83 (1.30)	7.83 (1.47)	7.79 (1.33)	7.88 (1.37)	$F = 0.00$, $p = .99$, $\eta_p^2 < .01$	$F = 0.21$, $p = .65$, $\eta_p^2 < .01$	$F = 5.60$, $p = .02$, $\eta_p^2 = .02$*
Interpersonal							
Past	7.52 (1.58)	7.78 (1.50)	7.70 (1.54)	7.48 (1.57)	$F = 1.71$, $p = .19$, $\eta_p^2 = .01$	$F = 1.94$, $p = .16$, $\eta_p^2 = .01$	$F = 0.50$, $p = .48$, $\eta_p^2 < .01$
Present	7.89 (1.42)	7.93 (1.57)	7.88 (1.53)	7.92 (1.40)	$F = 0.05$, $p = .82$, $\eta_p^2 < .01$	$F = 0.17$, $p = .68$, $\eta_p^2 < .01$	$F = 2.38$, $p = .12$, $\eta_p^2 = .01$
Future	8.24 (1.26)	8.34 (1.25)	8.28 (1.21)	8.26 (1.31)	$F = 0.42$, $p = .52$, $\eta_p^2 < .01$	$F = 0.40$, $p = .53$, $\eta_p^2 < .01$	$F = 1.91$, $p = .17$, $\eta_p^2 = .01$
Community							
Past	6.98 (1.64)	6.63 (2.13)	6.93 (1.69)	6.83 (1.91)	$F = 2.40$, $p = .12$, $\eta_p^2 = .01$	$F = 0.12$, $p = .73$, $\eta_p^2 < .01$	$F = 0.14$, $p = .71$, $\eta_p^2 < .01$
Present	7.16 (1.64)	6.99 (1.91)	7.09 (1.60)	7.13 (1.83)	$F = 0.59$, $p = .44$, $\eta_p^2 < .01$	$F = 0.05$, $p = .83$, $\eta_p^2 < .01$	$F = 0.01$, $p = .93$, $\eta_p^2 < .01$
Future	7.41 (1.61)	7.34 (1.80)	7.39 (1.44)	7.39 (1.86)	$F = 0.09$, $p = .77$, $\eta_p^2 < .01$	$F = 0.11$, $p = .74$, $\eta_p^2 < .01$	$F = 0.59$, $p = .44$, $\eta_p^2 < .01$
Occupational							
Past	6.96 (1.77)	6.48 (1.98)	6.89 (1.89)	6.75 (1.80)	$F = 4.41$, $p = .04$, $\eta_p^2 = .01$*	$F = 0.39$, $p = .53$, $\eta_p^2 < .01$	$F = 0.00$, $p = .97$, $\eta_p^2 < .01$
Present	7.22 (1.57)	7.08 (1.63)	7.30 (1.46)	7.06 (1.69)	$F = 0.58$, $p = .45$, $\eta_p^2 < .01$	$F = 3.11$, $p = .08$, $\eta_p^2 = .01$	$F = 1.56$, $p = .21$, $\eta_p^2 = .01$
Future	7.58 (1.55)	7.60 (1.53)	7.70 (1.42)	7.47 (1.65)	$F = 0.01$, $p = .93$, $\eta_p^2 < .01$	$F = 2.32$, $p = .13$, $\eta_p^2 = .01$	$F = 0.75$, $p = .39$, $\eta_p^2 < .01$
Physical							
Past	6.51 (1.96)	6.56 (1.78)	6.68 (1.90)	6.36 (1.90)	$F = 0.03$, $p = .86$, $\eta_p^2 < .01$	$F = 0.85$, $p = .36$, $\eta_p^2 < .01$	$F = 1.06$, $p = .31$, $\eta_p^2 < .01$
Present	6.76 (1.75)	6.74 (1.68)	6.93 (1.58)	6.58 (1.84)	$F = 0.01$, $p = .93$, $\eta_p^2 < .01$	$F = 1.86$, $p = .17$, $\eta_p^2 = .01$	$F = 0.35$, $p = .56$, $\eta_p^2 < .01$
Future	7.67 (1.55)	7.62 (1.44)	7.71 (1.43)	7.60 (1.59)	$F = 0.07$, $p = .80$, $\eta_p^2 < .01$	$F = 0.51$, $p = .48$, $\eta_p^2 < .01$	$F = 0.10$, $p = .76$, $\eta_p^2 = .02$

Psychological							
Past	6.54 (2.04)	6.09 (2.18)	6.47 (2.07)	6.35 (2.11)	$F = 2.98$, $p = .09$, $\eta_p^2 = .01$	$F = 0.08$, $p = .77$, $\eta_p^2 < .01$	$F = 0.23$, $p = .64$, $\eta_p^2 < .01$
Present	7.22 (1.59)	6.78 (2.00)	7.14 (1.73)	7.05 (1.73)	$F = 4.28$, $p = .04$, $\eta_p^2 = .01$*	$F = 0.50$, $p = .48$, $\eta_p^2 < .01$	$F = 0.33$, $p = .57$, $\eta_p^2 < .01$
Future	7.81 (1.48)	7.61 (1.46)	7.79 (1.37)	7.71 (1.55)	$F = .1.18$, $p = .28$, $\eta_p^2 < .01$	$F = 0.91$, $p = .34$, $\eta_p^2 < .01$	$F = 1.45$, $p = .23$, $\eta_p^2 = .01$
Economic							
Past	6.99 (1.67)	7.32 (1.84)	7.24 (1.64)	6.94 (1.80)	$F = 2.34$, $p = .13$, $\eta_p^2 = .01$	$F = 1.80$, $p = .18$, $\eta_p^2 = .01$	$F = 0.01$, $p = .95$, $\eta_p^2 < .01$
Present	7.08 (1.68)	7.37 (1.60)	7.30 (1.61)	7.03 (1.70)	$F = 1.78$, $p = .18$, $\eta_p^2 = .01$	$F = 2.78$, $p = .10$, $\eta_p^2 = .01$	$F = 0.88$, $p = .35$, $\eta_p^2 < .01$
Future	7.39 (1.59)	7.53 (1.74)	7.50 (1.45)	7.37 (1.81)	$F = 0.44$, $p = .51$, $\eta_p^2 < .01$	$F = 1.09$, $p = .30$, $\eta_p^2 < .01$	$F = 1.01$, $p = .32$, $\eta_p^2 < .01$

* $p < .05$.

To answer Question 1B, we conducted a series of chi-squares comparing perceptions of union efficacy between members and non-members, and casual and dedicated members, in New Zealand and Australia. The frequencies of perceptions of union efficacy are shown in Tables 8A, B, and C.

The association between whether a participant was a union member and how they perceived the efficacy of unions was statistically significant, $\chi^2(3, 469) = 40.04$, $p < .01$. As shown in Table 8A, when comparing group proportions, nearly three times as many members as non-members reported that 'unions improved both their wellbeing and working conditions,' and twice as many members as non-members reported that 'unions improved their wellbeing but not their working conditions.' Conversely, around twice as many non-members as members reported that 'unions have not improved their wellbeing, nor their working conditions.' The association between NZ and Australian members was not statistically significant, $\chi^2(3, 307) = 3.72$, $p = .29$, nor between NZ and Australian non-members, $\chi^2(3, 162) = 3.95$, $p = .27$. The relevant comparisons are shown in Table 8B.

The association between whether a participant was a casual or dedicated member and how they perceived the efficacy of unions was statistically significant, $\chi^2(3, 307) = 36.36$, $p < .01$. As shown in Table 8A, when comparing group proportions, around two and a half times as many dedicated members as casual members reported that 'unions improved both their wellbeing and working conditions,' and around twice as many dedicated members as casual members reported that 'unions improved their wellbeing but not their working conditions.' Conversely, over two and a half times as many casual members as dedicated members reported that 'unions have not improved their wellbeing, nor their working conditions.' The association between casual NZ and Australian members was not statistically significant, $\chi^2(3, 152) = 4.52$, $p = .21$, nor between dedicated NZ and Australian members, $\chi^2(3, 155) = 2.27$, $p = .52$. The relevant comparisons are shown in Table 8C.

Table 8A

Frequencies of Perceptions of Union Efficacy by Membership and Participation Level

Perception of union efficacy	Member (*n*, %)	Non-Member (*n*, %)	Casual (*n*, %)	Dedicated (*n*, %)
Unions have improved both my wellbeing and working conditions	84 (27.36)	15 (9.26)	24 (15.79)	60 (38.71)
Unions have improved my wellbeing but not my working conditions	36 (11.73)	9 (5.56)	12 (7.89)	24 (15.48)
Unions have improved my working conditions but not my wellbeing	107 (34.85)	55 (33.95)	58 (38.16)	49 (31.61)
Unions have not improved my wellbeing, nor my working conditions	80 (26.06)	83 (51.23)	58 (38.16)	22 (14.19)

Table 8B

Frequencies of Perceptions of Union Efficacy by Membership and Country

Perception of union efficacy	Member (*n*, %)		Non-Member (*n*, %)	
	NZ (*n* = 217)	AU (*n* = 90)	NZ (*n* = 70)	AU (*n* = 92)
Unions have improved both my wellbeing and working conditions	61 (28.11)	23 (25.56)	6 (8.57)	9 (9.78)
Unions have improved my wellbeing but not my working conditions	23 (10.60)	13 (14.44)	3 (4.29)	6 (6.52)
Unions have improved my working conditions but not my wellbeing	71 (32.72)	36 (40.00)	19 (27.14)	36 (39.13)
Unions have not improved my wellbeing, nor my working conditions	62 (28.57)	18 (20.00)	42 (60.00)	41 (44.57)

Table 8C

Frequencies of Perceptions of Union Efficacy by Participation Level and Country

Perception of union efficacy	Casual (*n*, %)		Dedicated (*n*, %)	
	NZ (*n* = 106)	AU (*n* = 46)	NZ (*n* = 111)	AU (*n* = 44)
Unions have improved both my wellbeing and working conditions	19 (17.92)	5 (10.87)	42 (37.84)	18 (40.91)
Unions have improved my wellbeing but not my working conditions	8 (7.55)	4 (8.70)	15 (13.51)	9 (20.45)
Unions have improved my working conditions but not my wellbeing	35 (33.02)	23 (50.00)	36 (32.43)	13 (29.55)
Unions have not improved my wellbeing, nor my working conditions	44 (41.51)	14 (30.43)	18 (16.22)	4 (9.09)

Members and non-members perceived the efficacy of unions differently, as did casual and dedicated members, regardless of country. Members perceived unions as being more efficacious than non-members, and dedicated members perceived unions as being more efficacious than casual members.

Identifying Predictors of Union Membership From Individual Differences

To answer Question 2A, we constructed four five-step logistic regressions, with select demographics in the first step, political orientation in the second, AICS scores in the third, personality trait scores in the fourth, and Authenticity Scale scores in the fifth. The first two models predicted union membership in New Zealand and Australia (Table 9). The second two models predicted participation level in New Zealand and Australia (Table 10).

As shown in Table 9, the final model for predicting membership in New Zealand was statistically significant, explaining 22.50% of the variance in membership. The statistically significant predictors were political orientation, eXtraversion, and Authentic Living. Specifically, the odds of being a member in New Zealand increased by 16% for each one-point increase in eXtraversion and 20% for each one-point increase in Authentic Living. Conversely, they decreased by 31% for each one-point increase in political orientation. The NZ model had a high overall classification accuracy of 78.00%. However, this number is misleading, as the model correctly classified 94.90% of members, but only 25.70% of non-members.

The final model for predicting membership in Australia was statistically significant, explaining 28.20% of the variance in membership. The statistically significant predictors were man vs. woman, Competitiveness, and Emotionality. Specifically, the odds of being a member in Australia decreased by 20% if a participant was a woman, 88% for each one-point increase in Competitiveness, and 85% for each one-point increase in Emotionality. The

Australian model had a high overall classification accuracy of 69.80%, correctly classifying 73.30% of members and 66.30% of non-members.

As shown in Table 10, the final model for predicting participation level in New Zealand was statistically significant, explaining 25.00% of the variance in the participation level of members. The statistically significant predictors were age, man vs. woman, Competitiveness, and Self-Alienation. Specifically, the odds of being a dedicated member in New Zealand decreased by 4% for every year older a participant was, 66% if they were a woman, 11% for each one-point increase in Competitiveness, and 9% for each one-point increase in Self-Alienation. The NZ model had a high overall classification accuracy of 67.30%, correctly classifying 66.00% of casual members and 68.50% of dedicated members.

The final model for predicting participation level in Australia was statistically significant, explaining 48.70% of the variance in participation level of members. The statistically significant predictors were man vs. woman and Competitiveness. Specifically the odds of being a dedicated member in Australia decreased by 79% if a participant was a woman. Conversely, the odds increased by 28% for each one-point increase in Competitiveness. The Australian model had a high overall classification accuracy of 73.30%, correctly classifying 76.10% of casual members and 70.50% of dedicated members.

Our models explained moderate (22.50%) to large (48.70%) amounts of variance in membership and participation level despite containing few statistically significant predictors. It seems, then, that union membership and participation level can be predicted in academic staff with some accuracy by at least a small selection of demographic, personality, and sociopolitical characteristics. Moreover, the statistically significant predictors varied by country, suggesting that predictors are likely to be socioculturally dependent.

Table 9

Hierarchical Logistic Regression Model Predicting Union Membership in New Zealand and Australia From Select Demographics; Political Orientation; AICS Total Scores; HEXACO-60, Interstitial Altruism Scale, and IPIP Neuroticism Scale Total Scores; and Authenticity Scale Total Scores

Predictors	New Zealand[a]				Australia[b]			
	B (*SE*)	Wald	Odds Ratio (95% *CI*)	*p*	*B (SE)*	Wald	Odds Ratio (95% *CI*)	*p*
Step 1								
Constant	-4.97 (3.48)	2.04	0.01	.15	4.71 (4.23)	1.24	110.78	.27
Age	0.01 (0.01)	0.21	1.01 (0.98, 1.03)	.65	0.02 (0.02)	1.76	1.02 (0.99, 1.06)	.18
Gender								
Man vs. woman	-0.59 (0.36)	2.70	0.55 (0.27, 1.12)	.10	-0.80 (0.40)	3.99	0.45 (0.21, 0.99)	.05*
Man vs. other	-0.51 (0.95)	0.29	0.60 (0.09, 3.88)	.59	-0.56 (1.04)	0.29	0.56 (0.07, 4.62)	.59
Ethnicity								
NZ European vs. Māori	0.21 (0.78)	0.08	1.24 (0.27, 5.68)	.78	-	-	-	-
NZ European vs. other	-0.41 (0.34)	1.51	0.66 (0.34, 1.28)	.22	-	-	-	-
AU European vs. Aboriginal	-	-	-	-	0.53 (1.30)	0.16	1.69 (0.13, 21.62)	.69
AU European vs. other	-	-	-	-	-0.20 (0.37)	0.30	0.82 (0.39, 1.69)	.59
Lower income	0.52 (0.39)	1.79	1.69 (0.78, 3.63)	.18	0.45 (0.41)	1.18	1.57 (0.70, 3.53)	.28
Step 2								
Political orientation	-0.38 (0.15)	6.82	0.69 (0.52, 0.91)	.01*	-0.31 (0.16)	3.60	0.73 (0.53, 1.01)	.06
Step 3								
(AICS) Competitiveness	-0.08 (0.05)	3.07	0.92 (0.84, 1.01)	.08	-0.12 (0.05)	6.59	0.89 (0.81, 0.97)	.01*
(AICS) Unique	-0.07 (0.08)	0.77	0.93 (0.79, 1.09)	.38	0.05 (0.09)	0.37	1.05 (0.89, 1.25)	.54
(AICS) Responsibility	0.01 (0.07)	0.03	1.01 (0.89, 1.15)	.88	0.00 (0.07)	0.00	1.00 (0.88, 1.15)	.95
(AICS) Advice	0.05 (0.06)	0.61	1.05 (0.93, 1.17)	.44	0.08 (0.06)	1.58	1.08 (0.96, 1.22)	.21
(AICS) Harmony	0.02 (0.04)	0.13	1.02 (0.93, 1.11)	.72	-0.07 (0.05)	2.19	0.93 (0.84, 1.02)	.14
(AICS) Closeness	0.01 (0.05)	0.06	1.01 (0.92, 1.11)	.81	0.09 (0.05)	3.01	1.10 (0.99, 1.22)	.08
Step 4								
(HEXACO-60) Honesty-Humility	-0.02 (0.05)	0.13	0.98 (0.88, 1.09)	.68	-0.06 (0.06)	1.12	0.94 (0.84, 1.06)	.29
(HEXACO-60) Emotionality	0.03 (0.06)	0.35	1.03 (0.92, 1.15)	.62	-0.15 (0.07)	5.17	0.86 (0.76, 0.98)	.02*
(HEXACO-60) eXtraversion	0.15 (0.06)	6.30	1.16 (1.03, 1.31)	.02*	0.00 (0.08)	0.00	1.00 (0.86, 1.16)	> .99
(HEXACO-60) Agreeableness vs. Anger	0.00 (0.05)	0.01	1.00 (0.90, 1.11)	.96	-0.02 (0.06)	0.12	0.98 (0.88, 1.09)	.73

	(HEXACO-60) Conscientiousness	0.05 (0.06)	0.79	1.06 (0.93, 1.19)	.39	0.06 (0.07)	0.74	1.07 (0.92, 1.23)	.39
	(HEXACO-60) Openness to Experience	-0.03 (0.07)	0.19	0.97 (0.85, 1.11)	.62	-0.00 (0.07)	0.00	1.00 (0.86, 1.15)	.97
	Interstitial Altruism Scale	-0.05 (0.10)	0.22	0.95 (0.78, 1.16)	.61	0.05 (0.13)	0.13	1.05 (0.82, 1.34)	.72
	IPIP Neuroticism Scale	0.00 (0.06)	0.01	1.00 (0.88, 1.13)	.99	-0.04 (0.08)	0.34	0.96 (0.83, 1.11)	.56
Step 5									
	(Authenticity Scale) Authentic Living	0.18 (0.08)	5.14	1.20 (1.03, 1.39)	.02*	0.05 (0.09)	0.36	1.06 (0.89, 1.26)	.55
	(Authenticity Scale) Accepting External Influence	-0.01 (0.05)	0.10	0.99 (0.90, 1.08)	.79	0.01 (0.05)	0.06	1.01 (0.92, 1.12)	.81
	(Authenticity Scale) Self-Alienation	0.04 (0.04)	0.91	1.04 (0.96, 1.12)	.40	0.04 (0.05)	0.73	1.05 (0.95, 1.16)	.39

B (*SE*) = unstandardised beta and its standard error; *CI* = confidence interval.

* p < .05.

[a] Final regression model: χ^2 (24) = 46.86, $p < .01$. Nagelkerke R^2 = 22.50%.

[b] Final regression model: χ^2 (24) = 43.30, $p = .01$. Nagelkerke R^2 = 28.20%.

Table 10

Hierarchical Logistic Regression Model Predicting Union Participation Level in New Zealand and Australia From Select Demographics; Political Orientation; AICS Total Scores; HEXACO-60, Interstitial Altruism Scale, and IPIP Neuroticism Scale Total Scores; and Authenticity Scale Total Scores

Predictors	New Zealand[a]				Australia[b]			
	B (*SE*)	Wald	Odds Ratio (95% *CI*)	*p*	*B (SE)*	Wald	Odds Ratio (95% *CI*)	*p*
Step 1								
Constant	0.63 (3.81)	0.03	1.87	.87	-5.63 (8.77)	0.41	0.00	.52
Age	-0.05 (0.02)	9.91	0.96 (0.93, 0.98)	< .01**	0.02 (0.03)	0.76	1.02 (0.97, 1.08)	.22
Gender								
Man vs. woman	-1.09 (0.36)	9.11	0.34 (0.17, 0.68)	< .01**	-1.55 (0.68)	5.22	0.21 (0.06, 0.80)	.02*
Man vs. other	0.49 (1.31)	0.14	1.64 (0.13, 21.41)	.71	0.47 (2.04)	0.05	1.60 (0.03, 86.94)	.82
Ethnicity								
NZ European vs. Māori	-1.03 (0.68)	2.28	0.36 (0.09, 1.36)	.13	-	-	-	-
NZ European vs. other	-0.02 (0.35)	0.00	0.98 (0.49, 1.96)	.95	-	-	-	-
AU European vs. Aboriginal	-	-	-	-	-1.00 (1.90)	0.28	0.37 (0.01, 14.30)	.59
AU European vs. other	-	-	-	-	-0.28 (0.63)	0.19	0.76 (0.22, 2.62)	.66
Lower income	0.49 (0.38)	1.70	1.63 (0.78, 3.42)	.19	0.77 (0.75)	1.05	2.15 (0.50, 9.35)	.31
Step 2								
Political orientation	-0.16 (0.16)	1.08	0.85 (0.63, 1.15)	.30	-0.50 (0.36)	1.90	0.61 (0.30, 1.24)	.17
Step 3								
(AICS) Competitiveness	-0.11 (0.05)	5.38	0.89 (0.81, 0.98)	.02*	0.25 (0.11)	5.44	1.28 (1.04, 1.58)	.02*
(AICS) Unique	0.01 (0.08)	0.02	1.01 (0.86, 1.18)	.89	0.10 (0.17)	0.34	1.11 (0.79, 1.54)	.56
(AICS) Responsibility	0.02 (0.06)	0.06	1.02 (0.90, 1.15)	.81	-0.16 (0.13)	1.53	0.85 (0.67, 1.10)	.22
(AICS) Advice	0.05 (0.06)	0.56	1.05 (0.93, 1.18)	.46	0.04 (0.12)	0.13	1.04 (0.83, 1.31)	.72
(AICS) Harmony	0.07 (0.05)	2.27	1.07 (0.98, 1.18)	.13	-0.08 (0.09)	0.81	0.92 (0.77, 1.10)	.37
(AICS) Closeness	0.05 (0.05)	1.11	1.05 (0.96, 1.15)	.29	0.07 (0.10)	0.52	1.07 (0.89, 1.30)	.47
Step 4								
(HEXACO-60) Honesty-Humility	0.06 (0.05)	1.52	1.07 (0.96, 1.18)	.22	0.07 (0.13)	0.26	1.07 (0.83, 1.39)	.61
(HEXACO-60) Emotionality	0.01 (0.06)	0.03	1.01 (0.91, 1.12)	.88	-0.19 (0.13)	2.29	0.82 (0.64, 1.06)	.13
(HEXACO-60) eXtraversion	0.02 (0.06)	0.12	1.02 (0.91, 1.15)	.73	0.00 (0.13)	0.00	1.00 (0.77, 1.30)	.99
(HEXACO-60) Agreeableness vs. Anger	-0.02 (0.06)	0.13	0.98 (0.88, 1.09)	.72	-0.20 (0.10)	3.62	0.82 (0.67, 1.01)	.06
(HEXACO-60) Conscientiousness	-0.03 (0.06)	0.34	0.97 (0.86, 1.09)	.56	-0.18 (0.12)	2.16	0.83 (0.65, 1.06)	.14

	(HEXACO-60) Openness to Experience	0.07 (0.07)	1.01	1.07 (0.94, 1.23)	.31	0.15 (0.17)	0.85	1.17 (0.84, 1.61)	.36
	Interstitial Altruism Scale	0.12 (0.10)	1.35	1.13 (0.92, 1.38)	.25	0.32 (0.26)	1.53	1.37 (0.83, 2.27)	.22
	IPIP Neuroticism Scale	-0.02 (0.06)	0.08	0.98 (0.87, 1.11)	.77	0.18 (0.16)	1.31	1.20 (0.88, 1.64)	.25
Step 5									
	(Authenticity Scale) Authentic Living	-0.10 (0.08)	1.54	0.91 (0.77, 1.06)	.22	0.31 (0.18)	3.16	1.36 (0.97, 1.92)	.08
	(Authenticity Scale) Accepting External Influence	-0.06 (0.05)	1.98	0.94 (0.86, 1.03)	.16	0.11 (0.10)	1.42	1.12 (0.93, 1.35)	.23
	(Authenticity Scale) Self-Alienation	-0.10 (0.04)	5.30	0.91 (0.84, 0.99)	.02*	0.07 (0.09)	0.68	1.08 (0.90, 1.28)	.41

B (*SE*) = unstandardised beta and its standard error; *CI* = confidence interval.
* $p < .05$.
** $p < .01$.
[a] Final regression model: χ^2 (24) = 45.01, p = .01. Nagelkerke R^2 = 25.00%.
[b] Final regression model: χ^2 (24) = 40.95, p = .02. Nagelkerke R^2 = 48.70%.

To answer Question 2B, we conducted one chi-square comparing motivations to unionise between casual and dedicated members, using country as a layer variable, and a second chi-square comparing motivations to unionise between New Zealanders and Australians, using participation level as a layer variable. The frequencies of motivations for unionising are shown in Tables 11A and B.

As shown in Table 11A, casual and dedicated members' most common motivation was ‘equally instrumental and ideological.’ The association between a member’s participation level and their motivations for unionising was not statistically significant, $\chi^2(4, 307) = 6.45$, $p = .17$. As shown in Table 11B, New Zealanders’ most common motivation was ‘equally instrumental and ideological’ and Australians’ was ‘mostly ideological, some instrumental.’ The association between the motivations of dedicated NZ and Australian members was not statistically significant, $\chi^2(4, 155) = 1.53$, $p = .82$. However, the association between the motivations of casual NZ and Australian members was statistically significant, $\chi^2(4, 152) = 9.85$, $p = .04$. Specifically, when comparing group proportions, over twice as many Australian casual members as NZ casual members reported having ‘mostly ideological, some instrumental’ motivations.

Ultimately, casual and dedicated members had diverse motivations for unionising that were not meaningfully different between casual and dedicated members, nor between countries.

Table 11A

Frequencies of Motivation to Unionise by Participation Level

Motivation to unionise	Casual (*n*, %)	Dedicated (*n*, %)
Purely instrumental	19 (12.50)	12 (7.74)
Mostly instrumental, some ideological	40 (32.00)	28 (18.06)
Equally instrumental and ideological	52 (41.60)	65 (41.94)
Mostly ideological, some instrumental	37 (24.34)	47 (30.32)
Purely ideological	4 (2.63)	3 (1.94)

Table 11B

Frequencies of Motivation to Unionise by Participation Level and Country

Motivation to unionise	Total (*n*, %)		Casual (*n*, %)		Dedicated (*n*, %)	
	NZ (*n* = 217)	AU (*n* = 90)	NZ (*n* = 106)	AU (*n* = 46)	NZ (*n* = 111)	AU (*n* = 44)
Purely instrumental	23 (10.60)	8 (8.89)	14 (13.21)	5 (10.87)	9 (8.11)	3 (6.82)
Mostly instrumental, some ideological	50 (23.04)	18 (20.00)	28 (26.42)	12 (26.09)	22 (19.82)	6 (13.64)
Equally instrumental and ideological	88 (40.55)	29 (32.22)	41 (38.68)	11 (23.91)	47 (42.34)	18 (40.91)
Mostly ideological, some instrumental	50 (23.04)	34 (37.78)	19 (17.92)	18 (39.13)	31 (27.93)	16 (36.36)
Purely ideological	6 (2.76)	1 (1.11)	4 (3.77)	0 (0.00%)	2 (1.80)	1 (2.27)

To further characterise members, we used two-way ANOVAs to compare NZ and Australian casual and dedicated members' responses to select questions from the Kelly and Kelly questionnaire related to the influence of unions in the workplace, the effect of participation in unions, and union activism. (Table 12).

As shown in Table 12, when members were asked to rate how desirable it would be if their union increased its influence in their workplace, we observed statistically significant effects of participation level and country x participation level. However, Levene's test of equality of error variances was significant, meaning the assumption of homogeneity of variance was violated. Consequently, we cannot accurately interpret the *F* test. Consider instead the partial eta squared: The participation level effect size was large and the country x participation level effect size was small. The mean scores show that dedicated members tended to find a more influential union more desirable than casual members. When members were asked if greater participation in their union would make any difference in increasing its influence in their workplace, there were statistically significant participation level and country x participation level effects: Dedicated members tended to rate their participation as making more of a difference than did casual members; the size of this effect was large. Specifically, Australian dedicated members (M = 6.45, SD = 0.79) tended to rate the influence of their participation higher than NZ dedicated members (M = 6.07, SD = 1.02). Conversely, NZ casual members (M = 5.30, SD = 1.45) tended to rate the influence of their participation higher than Australian casual members (M = 4.98, SD = 1.57); the size of this effect was small.

Also shown in Table 12 are members' average responses when asked to rate how much importance they would attach to the reactions of different groups of people if they were to become a union activist. Dedicated members tended to place less importance on the reactions of their immediate superiors than casual members; New Zealanders tended to place

more importance on the reactions of their partners/family members than Australians; and Australian dedicated members (M = 5.02, SD = 1.84) tended to place more importance on the reactions of their closest friends than NZ dedicated members (M = 4.78, SD = 1.62), while NZ casual members (M = 4.97, SD = 1.53) tended to place more importance on said reactions than Australian casual members (M = 4.39, SD = 1.82). The sizes of all three effects were small.

To answer Question 2C, we calculated Z-scores to compare NZ and Australian non-members' reasons for not unionising, feelings towards unions, and likelihood of unionising (Table 13).

As shown in Table 13, the most common reason non-members had for not unionising in both countries was membership fees being too expensive. The least common reasons for New Zealanders were disbelieving in unions and unions not cooperating sufficiently with management, and the least common reason for Australians was disbelieving in unions. When comparing group proportions of reasons for not unionising between countries, nearly ten times as many New Zealanders as Australians reported disbelieving in unions. There were no statistically significant differences in union opinions between countries. Finally, when comparing the group proportions of likelihood to join a union, nearly three times as many Australians did not know if they would unionise compared to New Zealanders.

Table 12

Results of Two-Way ANOVAs Comparing Responses to Select Kelly and Kelly Questions Between New Zealanders/Australians and Casual/Dedicated Union Members

Questions	Country *M* (*SD*)		Participation level *M* (*SD*)		Two way ANOVA		
	NZ (*n* = 217)	AU (*n* = 90)	Casual (*n* = 152)	Dedicated (*n* = 155)	Country (F, p, η_p^2)	Participation level (F, p, η_p^2)	Country x participation level (F, p, η_p^2)
(13) Desirability of increased union influence	5.70 (1.30)	5.70 (1.45)	5.20 (1.49)	6.18 (0.97)	$F = 0.04$, $p = .85$, $\eta_p^2 < .001$	$F = 51.54$, $p < .01$, $\eta_p^2 > .15$**	$F = 5.09$, $p = .03$, $\eta_p^2 = .02$*
(14) Affect of personal participation on influence	3.59 (1.91)	4.01 (2.12)	3.07 (1.80)	4.35 (1.95)	$F = 3.83$, $p = .05$, $\eta_p^2 = .01$	$F = 46.69$, $p < .01$, $\eta_p^2 = .13$**	$F = 9.49$, $p < .01$, $\eta_p^2 = .03$**
(20) Union activism is an expression of politics [Importance of reactions to participant becoming a union activist]	4.60 (1.58)	4.84 (1.45)	4.53 (1.49)	4.81 (1.60)	$F = 1.73$, $p = .19$, $\eta_p^2 = .01$	$F = 3.73$, $p = .05$, $\eta_p^2 = .01$	$F = 1.05$, $p = .31$, $\eta_p^2 < .01$
(26) Colleagues	4.05 (1.51)	3.90 (1.74)	4.04 (1.53)	3.97 (1.63)	$F = 0.60$, $p = .44$, $\eta_p^2 < .01$	$F = 0.46$, $p = .50$, $\eta_p^2 < .01$	$F = 0.64$, $p = .42$, $\eta_p^2 < .01$
(27) Immediate superiors	4.06 (1.53)	3.98 (1.75)	4.35 (1.55)	3.74 (1.58)	$F = 0.26$, $p = .61$, $\eta_p^2 < .01$	$F = 9.82$, $p < .01$, $\eta_p^2 = .03$**	$F = 0.00$, $p = .98$, $\eta_p^2 < .001$
(28) Partner/family	5.59 (1.55)	5.19 (1.73)	5.50 (1.62)	5.44 (1.61)	$F = 3.87$, $p = .05$, $\eta_p^2 = .01$*	$F = 0.20$, $p = .65$, $\eta_p^2 < .01$	$F = 3.68$, $p = .06$, $\eta_p^2 = .01$
(29) Closest friends	4.88 (1.57)	4.70 (1.85)	4.80 (1.64)	4.85 (1.68)	$F = 0.68$, $p = .41$, $\eta_p^2 < .01$	$F = 1.15$, $p = .29$, $\eta_p^2 < .01$	$F = 3.92$, $p = .05$, $\eta_p^2 = .01$*

Note. Numbers in parentheses correspond to questions in Appendix A, Part Three: Union-Related Questions for Union Members.
* $p < .05$.
** $p < .01$.

Table 13

Frequencies of Non-Members' Feelings Towards Unions and Likelihood of Unionising by Country

Questions	Total (*n*, %)	NZ (*n*, %)	AU (*n*, %)	*Z*	*p*
Reasons for not unionising					
Membership fees are too expensive	96 (59.26)	37 (52.86)	59 (64.13)	-1.45	.15
I'm not willing to participate in collective action, e.g., striking	49 (30.25)	22 (31.43)	27 (29.35)	0.29	.77
The union does not achieve anything I value	44 (27.16)	22 (31.43%)	22 (23.91)	1.07	.28
There is no point joining since I get all the benefits anyway	29 (17.90)	17 (24.29)	12 (13.04)	1.85	.06
I don't believe in unions	17 (10.49)	15 (21.43)	2 (2.17)	3.96	< .01**
Unions do not cooperate enough with management for the good of the workplace	36 (22.22)	15 (21.43)	21 (22.83)	-0.21	.83
How do you feel about unions?					
I'm anti-union	14 (8.64)	8 (11.43)	6 (6.52)	1.10	.27
I'm ambivalent towards unions	90 (55.56)	39 (55.71)	51 (55.43)	0.04	.97
I'm pro-union	58 (35.80)	23 (32.86)	35 (38.04)	-0.68	.50
If someone asked you to join a union, how likely is it that you would do so?					
Very unlikely	40 (24.69)	21 (30.00)	19 (20.65)	1.37	.17
Unlikely	74 (45.68)	34 (48.57)	40 (43.48)	0.64	.52
Likely	25 (15.43)	11 (15.71)	14 (15.22)	0.09	.93
Very likely	4 (2.47)	0	4 (4.35)	-1.77	.08
Don't know	19 (11.73)	4 (5.71)	15 (16.30)	-2.08	.04*

* $p < .05$.
** $p < .01$.

Identifying Predictors of Global Wellbeing From Individual Differences and Union Membership

To answer Question 3, we constructed a six-step hierarchical linear regression model with total global wellbeing as the outcome; demographic, personality, and sociopolitical characteristics in the first five steps; and union membership in the sixth step. Because there were so few differences between New Zealand and Australian responses in all prior analyses, we decided to collapse between the countries for this analysis, maximising its statistical and explanatory power. The results are shown in Table 14. Although we tested multiple models, there was no difference in the proportion of variance explained by union membership based on its position in the model. Thus, we only report the results of the first, preregistered model.

The final model for predicting total global wellbeing was statistically significant, $F(26, 442) = 5.94$, $p < .001$, explaining 15.60% of the variance in wellbeing—a small percentage. The statistically significant predictors were age, lower income, Authentic Living, and Self-Alienation. Specifically, total global wellbeing increased by 0.01 points for every year older a participant was and 0.07 points for each one-point increase in Authentic Living. Conversely, it decreased by 0.57 points if a participant had lower income and 0.06 points for each one-point increase in Self-Alienation.

When union membership was included in the model, the adjusted *R* square decreased from 0.157 to 0.156, meaning it marginally reduced the model's ability to explain variance in global wellbeing. This was not the case for *R* square—which was .202 before and .203 after membership was added to the model—but we have chosen to report adjusted *R* square because our model had 26 predictors. Membership's position in the model did not affect its explanatory power.

Regardless of country, the total global wellbeing of academic staff could not be predicted by union membership at all, let alone over and above individual differences.

Among the individual differences, total global wellbeing was predicted by age, income, Neuroticism, Authentic Living, and Self-Alienation.

Table 14

Hierarchical Linear Regression Model Predicting Total Global Wellbeing From Select Demographics; HEXACO-60, Interstitial Altruism, and IPIP Neuroticism Scale Total Scores; Authenticity Scale Total Scores; AICS Total Scores; Political Orientation; and Union Membership

Predictors	*Adjusted* R^2 (Δ*Adjusted* R^2)	ANOVA (*F*, *p*)	*B* (*SE*)	*B* 95% *CI*	β	*t*	*p*
Step 1 (*df* = 7, ΔF = 5.71, *p* ΔF < .001**)	.07 (.07)	5.71, < .001**					
Constant			5.14 (1.27)	2.64, 7.64		4.04	< .001**
Age			0.01 (0.01)	0.00, 0.02	0.10	2.04	.04*
Gender							
Man vs. woman			-0.72 (0.12)	-0.31, 0.17	-0.03	-0.59	.56
Man vs. other			-0.26 (0.35)	-0.94, 0.42	-0.03	-0.75	.46
Ethnicity							
European vs. Māori			0.31 (0.30)	-0.27, 0.89	0.05	1.05	.30
European vs. Aboriginal			0.21 (0.55)	-0.86, 1.28	0.02	0.39	.70
European vs. Other			0.07 (0.12)	-0.16, 0.30	0.03	0.60	.55
Lower income			-0.57 (0.13)	-0.82, -0.32	-0.20	-4.43	< .001**
Step 2 (*df* = 8, ΔF = 2.22, *p* ΔF = .03*)	.09 (.02)	3.90, < .001**					
(HEXACO-60) Honesty-Humility			0.01 (0.02)	-0.03, 0.05	0.02	0.45	.65
(HEXACO-60) Emotionality			0.02 (0.02)	-0.02, 0.06	0.05	0.96	.34
(HEXACO-60) eXtraversion			0.03 (0.02)	-0.01, 0.08	0.07	1.46	.14
(HEXACO-60) Agreeableness vs. Anger			-0.01 (0.02)	-0.05, 0.02	-0.04	-0.83	.41
(HEXACO-60) Conscientiousness			0.01 (0.02)	-0.03, 0.05	0.03	0.53	.60
(HEXACO-60) Openness to Experience			0.01 (0.02)	-0.03, 0.06	0.03	0.62	.53
Interstitial Altruism Scale			-0.03 (0.04)	-0.10, 0.04	-0.04	-0.95	.34
IPIP Neuroticism Scale			-0.05 (0.02)	-0.09, 0.00	-0.09	-1.95	.05
Step 3 (*df* = 3, ΔF = 12.84, *p* ΔF < .001**)	.15 (.06)	5.65, < .001**					
(Authenticity Scale) Authentic Living			0.07 (0.03)	0.02, 0.12	0.14	2.66	.01*
(Authenticity Scale) Accepting External Influence			-0.00 (0.02)	-0.03, 0.30	-0.00	-0.07	.94
(Authenticity Scale) Self-Alienation			-0.06 (0.01)	-0.09, -0.03	-0.22	-4.17	< .001**
Step 4 (*df* = 6, ΔF = 1.41, *p* ΔF = .21)	.16 (.01)	4.61, < .001**					
(AICS) Competitiveness			0.02 (0.02)	-0.01, 0.05	0.07	1.47	.14
(AICS) Unique			-0.03 (0.03)	-0.08, 0.03	-0.05	-1.05	.30

(AICS) Responsibility			-0.00 (0.02)	-0.05, 0.04	-0.00	-0.08	.93
(AICS) Advice			0.03 (0.02)	-0.01, 0.07	0.07	1.46	.14
(AICS) Harmony			0.01 (0.02)	-0.02, 0.04	0.03	0.56	.58
(AICS) Closeness			0.01 (0.02)	-0.02, 0.04	0.02	0.46	.64
Step 5 (*df* = 1, *ΔF* = 1.51, *p* Δ*F* = .22)	.16 (.00)	4.49, < .001**					
Political orientation			0.06 (0.05)	-0.04, 0.16	0.06	1.15	.25
Step 6 (*df* = 1, *ΔF* = 0.16, *p* Δ*F* = .69)	.16 (.00)	4.32, < .001**					
Union membership			-0.05 (0.12)	-0.29, 0.19	-0.02	-0.41	.69

R^2 = variance explained; ΔR^2 = change in *R*2; *B* = unstandardised beta; *SE* = standard error; *CI* = confidence interval; β = standardised beta.

* $p < .05$.

** $p < .01$.

Discussion

Relatively little I/O research has been done on the relationships between unionisation and wellbeing or individual differences, even though the primary goal of unionism is to improve worker wellbeing and unions may attract certain kinds of workers. It is pertinent to understand both relationships because individual differences have been shown to correlate with wellbeing; without knowing who tends to unionise, the individual differences of members may be obfuscating the nature of the relationship between membership or participation level and wellbeing.

We sought to address these gaps in the literature in three ways: First, we compared the total, past, present, and future global and domain-specific I COPPE scores of members and non-members, and casual and dedicated members, in New Zealand and Australia. Additionally, we compared these groups' perceptions of union efficacy (their ability to improve working conditions and wellbeing). Second, to identify differences in individual differences between our groups, we predicted union membership and participation level in New Zealand and Australia using scores on measures of personality (the HEXACO-60, Interstitial Altruism Scale, IPIP Neuroticism Scale, and Authentic Living Scale) and sociopolitical (political orientation and the AICS) characteristics. Third, we predicted total global wellbeing collapsed between countries using those measures of personality and sociopolitical characteristics, and union membership.

The Relationship Between Union Membership and Wellbeing

Our main wellbeing analyses did not find any statistically significant differences in total global or domain-specific I COPPE ratings between members and non-members, nor casual and dedicated members, regardless of country. Our exploratory wellbeing analyses did find that NZ and Australian members had lower future economic wellbeing than non-members; NZ members had higher present and future psychological wellbeing than

Australian members, and vice versa with non-members; and dedicated NZ members had higher future global wellbeing than Australian dedicated members, and vice versa with casual members. However, these differences and their effect sizes were small. These results did not support Hypothesis 1A. When comparing perceptions of union efficacy, members and dedicated members believed unions were more efficacious than non-members and casual members, respectively, with no difference between countries. These results supported Hypothesis 1B.

Our wellbeing results prima facie suggest that the unions representing public secondary and tertiary academic staff in New Zealand and Australia are neither beneficial nor detrimental to their members' wellbeing—regardless of how much said members participate in their union or value their membership. These results do not necessarily contradict those of previous studies, which predominantly investigated the relationships between membership or participation level and likely predictors of wellbeing. Their findings were inconsistent: For instance, Borjas (1979) evidenced a negative correlation between membership and job satisfaction, while Blanchflower and Davis (2020) evidenced a positive one. Unlike those studies, we investigated the relationship between membership or participation level and subjective evaluations of wellbeing, which cannot be assumed from the ratings of likely predictors (e.g., a person with high job satisfaction does not necessarily have high occupational wellbeing). Even so, given those previously evidenced relationships, our results are unexpected. They are also incongruous with our participants' perceptions of union efficacy: if so many members and dedicated members believed that unions had improved their working conditions and wellbeing, why didn't they have higher wellbeing than non-members and casual members, respectively?

Perhaps as Aronson's (1972) work suggests, members rationalised their involvement in their union by perceiving it as being more efficacious than it actually was. This would

explain why dedicated members had the largest proportion of "unions have improved both my wellbeing and working conditions" responses: The more one participates in their union and considers their membership an important part of their identity, the greater their need to rationalise these attachments. Even so, if members were consistently attributing working condition and wellbeing improvements to their unions, membership and wellbeing should have positively correlated because perceptions of efficacy and wellbeing are related subjective judgements. Furthermore, a combined 74.19% of New Zealanders and 61.11% of Australians had purely, mostly, or equally instrumental motivations. If these people felt that the benefits of their membership were not genuinely proportional to its cost (at minimum, the membership fee) over an extended period (remembering the average membership tenure was over 15 years), it seems more likely that they would leave the union than stay to make inflated judgements about its efficacy. It also cannot be the case that education is an entirely unproblematic industry that does not benefit from unionisation. If there were no problems to fix, education would not be highly unionised, and members would not have recently struck over reasonable issues like insufficient pay, overwork, and COVID-19 concerns. Similarly, it cannot be the case that unions were just uniquely ineffective during the data collection period because members' average global and domain-specific wellbeing was higher in the present than in the past, and higher in the future than in the present.

The threat effect is a compelling explanation for this pattern of results. Since education is a highly unionised industry, if education unions consistently improve working conditions—as members reported they did—they would positively influence the standards of the entire industry, rather than just those of highly unionised schools. If better working conditions precipitate higher wellbeing, and everyone has similar working conditions regardless of personal membership, we would not expect members to have significantly higher wellbeing than non-members. This explanation is consistent with nearly one-fifth of

non-members reporting that they had not unionised because they "receiv[ed] all the benefits anyway," and a combined 48.77% reporting that the influence of unions had improved their working conditions and/or wellbeing. Additionally, average wellbeing scores were relatively high, ranging from 6.83 to 8.02 on an 11-point scale; if unions were a positive influence on the general working conditions of the education industry, we would expect all academic staff to have higher than lower wellbeing. If this explanation is accurate, then education unions might actually be quite effective, rather than totally ineffectual as our results initially suggest.

The Relationship Between Unions and Individual Differences

New Zealand members tended to be further left-wing, more extraverted, and lived more authentically than NZ non-members, while Australian members tended to be men, and less competitive and emotional than Australian non-members. New Zealand dedicated members tended to be younger, men, and less competitive and self-alienated than NZ casual members, while Australian dedicated members tended to be men, and more competitive than Australian casual members. These results supported Hypothesis 2A. Motivations to unionise did not significantly differ between casual or dedicated members. These results did not support Hypothesis 2B. Reasons for not unionising did differ significantly between countries. These results did not support Hypothesis 2C.

Given their roots in leftist philosophies, it is unsurprising that (education) unions attract left-wing workers. While being further left-wing was only a significant predictor for NZ members, it was approaching statistical significance for Australian members, and the furthest left-wing group in our sample, on average, was dedicated members. Competitiveness is the dimension of individualism most orthogonal to the ideologies and modus operandi of organised labour. Labour unions decrease competition and promote cooperation between workers by uniting them to advocate for collective interests, resulting in equal treatment for all members under collective employment agreements. Consequently, it is unsurprising that

Australian members and NZ dedicated members tended to be lower in competitiveness. However, we are unsure why Australian dedicated members tended to be higher in competitiveness than their casual counterparts. Saying that, the mean Compete score of Australian dedicated members was 11.29, which is just under the midpoint of the 24-point Compete scale, so they were not a particularly competitive group despite being more competitive than their casual counterparts. This result is possibly due to our Australian sample being relatively small.

Given the contradictory literature, we had no expectations about differences in personality trait scores between our groups. New Zealand members' tendency to be more extraverted aligns with the work of McPhee et al. (2014), who found a positive correlation between extraversion and intention to participate in the union, and Houghton (2000), who found that higher extraversion was an antecedent of willingness to unionise. McPhee et al.'s rationale—that extraversion would predict active union participation because it involves social situations and the ability to confidently mediate between workers and management—is also a suitable explanation for the relationship between extraversion and membership. Regardless of one's level of participation, unions are still a community that promotes interpersonal connections between workers. We are unsure, though, why NZ members tended to be more extraverted while Australian members did not. New Zealand academic staff were not meaningfully more extraverted than Australian academic staff, considering the difference in mean eXtraversion between countries was only 1.04 points on a 50-point scale. Australian members' tendency to be lower in emotionality is similar to the negative correlation between neuroticism and membership found by Lucifora and Sturaro (2020), as the content of HEXACO's Emotionality subscale is similar to the Big Five's Neuroticism subscale. We are unsure why unions might attract less emotional people.

We are unsure why personality trait scores differed between the members and non-members, and casual and dedicated members, of New Zealand and Australia. Research shows that New Zealanders and Australians tend to score very similarly on measures of the Big Five (McCrae & Terracciano, 2005), the content of which is similar enough to the HEXACO that we would not expect major differences in national averages on the HEXACO either. Perhaps these differences in traits are owed to differences in the management styles of education unions between New Zealand and Australia, which we did not account for. Alternatively, they may be due to our Australian sample being relatively small.

Partially as we expected, Authentic Living tended to be higher among NZ members NZ non-members. While motivations to unionise did not differ significantly between casual and dedicated members, the specific nature of one's motivation does not affect how authentically they live; all that matters is whether they live in a way that satisfies their motivations, be they instrumental or ideological. What we do not understand is why Authentic Living was a significant predictor of membership in NZ but not in Australia. Relatedly, it makes sense that dedicated NZ members were less self-alienated than NZ casual members: If one knows that being a union member is an important part of their identity, then actively participating in the union is the behavioural expression of this self-knowledge. We are unsure why Australian dedicated members did not also tend to be less self-alienated.

While we may not have empirically demonstrated the rise of "Generation Union" per se, NZ dedicated members did tend to be younger—a relative term, considering the mean age of dedicated members was 44.59 years old, a little over two years younger than the mean age of the sample. We are unsure why this was the case in New Zealand but not Australia. We are also unsure why members in Australia, and dedicated members in both countries, were more likely to be men than women.

The Relationship Between Union Membership, Wellbeing, and Individual Differences

We found that increased age and Authentic Living, decreased Self-Alienation, and having lower income predicted total global wellbeing. Union membership did not predict any of the variance in total global wellbeing, regardless of its position in the linear regression model. These results did not support Hypothesis 3.

Given the lack of statistically significant differences in total global or domain-specific wellbeing between members and non-members, it is unsurprising that membership did not predict total global wellbeing. The precise nature of the relationship between age and wellbeing is unclear (Steptoe et al., 2015), so we are not sure why they positively correlated here. Sengupta et al. (2012) found that income was positively related to subjective wellbeing in New Zealand, and a similar relationship could be expected of Australia given general national similarities. It makes sense, then, that having a lower income (in this case "just enough to get by" or "[not enough] to make ends meet") would reduce global wellbeing. The role of authenticity in our model supports the findings of Wood et al. (2008), who demonstrated highly statistically significant correlations between the Satisfaction With Life Scale and Authentic Living (positive correlation) and Self-Alienation (negative correlation). The correlations they found between Accepting External Influence and the Satisfaction With Life Scale were small and not statistically significant, so it is unsurprising that it was not a statistically significant predictor of global wellbeing in our model.

Fewer individual differences predicted global wellbeing than would be expected given previous research. Despite their correlations with psychological and subjective wellbeing (which is proximate to global wellbeing, as we define it) (Anglim et al., 2020), the HEXACO traits and altruism were not statistically significant predictors in our model. Anglim et al. only analysed studies that used the full-length HEXACO Personality Inventory-Revised, so the lack of statistically significant correlations may be due to our use of the HEXACO-60.

Theoretical Implications

This study offers tentative answers to long-standing questions about the relationship between unions and subjective evaluations of wellbeing. Previous studies have primarily addressed these questions indirectly by investigating the relationship between unions and likely indicators of wellbeing. This thesis bridges that theoretical gap. Despite potential social costs and benefits, an ethos of cooperation, and correlations between union loyalty and feeling supported by one's union (Sinclair & Tetrick, 1995), our study found no statistically significant correlations between membership and interpersonal or community wellbeing. Despite contradictory correlations between membership and job satisfaction (Aronson, 1972; Blanchflower & Bryson, 2020; Borjas, 1979; Freeman, 1980; Pfeffer & Davis-Blake, 1990), this study found no correlation between membership and occupational wellbeing. Despite unions being described as "underappreciated social determinant[s] of health" (Leigh & Chakalov, 2021, p. 1), this study found no correlation between membership and physical wellbeing. Despite contradictory correlations between membership or participation in collective action and stress, depression, anxiety, anger, happiness, peacefulness, and self-esteem (Barling & Milligan, 1987; Blanchflower & Bryson, 2020; Fowler et al., 2009; Keane, 2012; MacBride et al., 1981; Reynolds & Buffel, 2020, Vestergren et al., 2018), this study found no correlation between membership and psychological wellbeing. Despite positive correlations between membership and pay satisfaction (Berger et al., 1983), this study found no correlation between membership and economic wellbeing. Ultimately, despite positive correlations between membership and life satisfaction (Blanchflower & Bryson, 2020; Keane, 2012), this study found no correlation between membership and global wellbeing.

While our results do not necessarily contradict these previously evidenced relationships, they do show that said relationships do not necessarily translate to improved or worsened senses of wellbeing. Furthermore, we have demonstrated that one's level of participation in their union is not related to global or domain-specific wellbeing either. Even

so, many members—especially dedicated ones—believed that unions have improved their working conditions and/or wellbeing. Due to the similar, relatively high ratings of wellbeing between members and non-members, and many non-members acknowledging the positive influence of unions in their own lives, the disconnection between membership and indicators of wellbeing versus wellbeing itself may be indicative of the threat effect. If that were the case, we would be the first study (to our knowledge) to demonstrate the threat effect's relationship to a broad range of wellbeing domains.

Of course, it may still be the case that unions just have very little effect on wellbeing—at least in the populations we sampled. While all jobs have unique, legitimate problems, education is a relatively comfortable pink-collar industry compared to a blue-collar industry like mining, for example. It stands to reason that unions have greater potential to affect wellbeing the more dangerous and physically demanding a job is. In that regard, our results might be indicative of the fact that academic staff have less dramatic problems than workers in other jobs, diminishing the relative potential of education unions to affect wellbeing. Either way, unions cannot be thought of as a monolith and deliberately studying them in different industries would seem to be the most productive approach moving forward.

This study also joins the small body of literature investigating the relationship between unionisation and individual differences. Unlike in past research (Lucifora & Sturaro, 2020; Parkes & Razavi, 2004), high scores in neuroticism, conscientiousness, and agreeableness were not statistically significant correlates of membership. Similar to past research (Houghton, 2000; McPhee et al., 2014), (NZ) members scored higher in extraversion than non-members. Otherwise, our results are relatively distinct from those of our predecessors. The traits that predicted membership and participation level also differed between New Zealand and Australia, countries that are very close geographically and similar socioculturally. We studied the same industry in both countries, and it seems unlikely that

education jobs would attract people with vastly different personality profiles between New Zealand and Australia. Furthermore, we recruited academic staff exclusively, while other studies recruited workers from one or more different industries—driving examiners in Parkes and Razavi (2004) and miscellaneous in Lucifora and Sturaro (2020). Consequently, the growing body of evidence suggests that unions might attract different types of people in different countries and industries. We have also shown that individual differences can be used to predict a member's willingness to participate in union activities, similar to McPhee et al. (2014).

To our knowledge, this is the first study to investigate authenticity in a union context. The present findings suggest that unions may be unique, important means by which workers can express themselves and/or take the necessary actions to achieve their desires authentically. Alternatively, unions may attract more authentic people. Unions should be considered a subject of interest in future authenticity research.

This study partially supports Beadles et al.'s (2023) finding that positive union attitudes and beliefs correlated with collectivistic tendencies. While our union members did not score significantly higher in measures of collectivism than non-members, Australian members did score significantly lower in (arguably) the most relevant dimension of individualism. Relatedly, we have demonstrated a tendency for union members to be further left-wing than non-members, affirming the political role of unions in Western society.

Interestingly, the results of our linear regression predicting total global wellbeing seemed to disagree with Lucas and Diener's (2015) review and Anglim et al.'s (2020) meta-analysis that evidenced strong relationships between personality traits and wellbeing. However, this is more likely to be an artefact of our data given the relatively small sample size than legitimate contradictory evidence.

Ultimately, the caveat to the interpretation and implications of our results is that they might be specific to public secondary and tertiary staff in New Zealand and Australia. Moreover, they represent only a small subset of those populations: those who are sufficiently interested in unions to take part in a study like this, leading to biased results. Because many of our results were different from those of previous research, wellbeing and individual differences may vary by country, industry, and even the type of union one is a member of. Education is a pink-collar industry, so it is reasonable to assume that our results are representative of the wellbeing and individual differences of academic staff in similar countries. However, they may not apply to blue- or white-collar workers, whose occupations, working conditions, and needs are vastly different. Ergo, this thesis highlights the need to study the wellbeing and individual differences of union members in as many different occupational and national settings as possible.

Practical Implications

One interpretation of the present wellbeing findings is that education unions in New Zealand and Australia contribute very little to the wellbeing of their members, regardless of their level of participation. Alternatively, due to the threat effect, unions may be so effective that their influence benefits members and non-members relatively equally, reducing the visibility of their influence in the process. In short, members do the work and get few exclusive benefits while non-members enjoy a trickle-down of benefits without doing any work themselves. Morally speaking, this is not objectionable in theory: all workers should be treated well, and equally so. In practice, this frames unions as a sort of "necessary evil"—insofar as management makes unions necessary to negotiate and maintain desirable working conditions—with members subjecting themselves to several costs (e.g., membership fees, risk of conflict with people who hold anti-union attitudes, time and energy invested into union activities, striking) to win benefits for themselves and "freeloading" non-members. For

people with more ideological motivations and collectivistic orientations, this situation might be acceptable, if not appealing. Conversely, for people with more instrumental motivations and individualistic orientations, this situation might be untenable, disincentivising them from unionising, let alone becoming dedicated members.

While previous studies examined populations much different than the ones examined here, using different tools than those used here, this thesis is further evidence that people who tend to unionise are not highly neurotic. At least, public secondary and tertiary academic staff in New Zealand and Australia are not. In fact, they tend to have several traits that may be desirable in a workplace context. This is especially true of authenticity. If unions are consistently associated with authenticity, and authenticity is consistently associated with positive workplace outcomes and increased wellbeing (van den Bosch & Taris, 2014; Sutton, 2020) —which is itself associated with positive workplace outcomes (Krekel et al., 2019)— then it may be in management's best interests to cooperate with unions. This may go some way to improve the image of unions and legitimise the complaints of their members in the eyes of detractors.

Relatedly, our results suggest that (education) unions do not tend to attract people with personality trait scores that have been associated with particularly high or low dispositional wellbeing. New Zealand members did tend to score higher in extraversion and Australian members lower in emotionality than non-members, which previous research says should be correlated with higher wellbeing (Anglim et al., 2020). However, even though extraversion had a larger correlation with wellbeing than emotionality in Anglim et al., there was no difference in wellbeing between NZ and Australian members. Additionally, the personality and sociopolitical characteristics that predicted membership were different between countries and contradicted previous research. Ergo, the growing body of evidence suggests that unions attract a variety of people and that a variety of people are willing to

dedicate themselves to the union. This means potential differences in wellbeing between members and non-members, or casual and dedicated members, are more likely to be due to the effects of membership or participation level than wellbeing tendencies associated with particular individual differences.

Finally, the most common reason for not unionising by a significant margin was expensive membership fees; the education unions in New Zealand and Australia cannot change non-members' unwillingness to participate in collective action (the second most common reason), but they can change how much they charge for membership.

Strengths and Limitations

This study's greatest strength was successfully addressing multiple gaps in the literature by synthesising previously unrelated and under-researched topics essential to understanding the role of unions in society. Studying wellbeing and individual differences together in a single sample clearly provides greater explanatory power than studying them separately in different samples.

We sampled from similar populations in different countries, allowing us to demonstrate relevant differences in wellbeing and individual differences on a national level while controlling for potential effects of industry. Despite having a smaller Australian sample, we had fairly proportional country, membership, and participation level groups, meaning our analyses were not negatively affected by disparate group sizes.

We improved on the shortcomings of previous research in several ways. First and most importantly, we directly assessed the wellbeing of participants, including wellbeing domains with ubiquitous relevance to work and unions. Second, we recruited both members and non-members, whereas some previous studies recruited members only. This enabled us to draw conclusions about the differences between members and non-members instead of assuming them based on the results of a single group. Third, we distinguished between casual

and dedicated members. While every member is valuable to the union, dedicated members are necessary for the operation and longevity of the union, so it is of special practical interest to know who tends to be more dedicated and how their wellbeing tends to be affected by the union relative to more casual members.

Our final strength was coincidental: the timing. This study was conducted during a period of heightened education union activity in both countries, and of heightened union activity around the world more generally. To best understand the relationship between unions, wellbeing, and individual differences, we need to study unions during times of positive, neutral, and negative industrial relations: Who sticks around during these different periods, and how is their wellbeing affected?

This study also had several limitations. We were not sufficiently informed on the regional processes and requirements for psychological research in Australian schools, resulting in a small Australian sample size. The length of the survey may have negatively affected the response rate and quality of responses, with members having to complete 48 more questions than non-members. The construction of the survey itself might have also been problematic. For practical purposes, the I COPPE should have been the first measure, rather than the penultimate one, seeing as it assessed our primary subject of interest. Since it came after the union-related questions, members and non-members were both asked about how the influence of unions had affected their wellbeing, potentially and unintentionally priming their responses to the I COPPE. Finally, we don't know what is specifically contributing to participants' wellbeing, which is the main strength of assessing likely indicators of wellbeing that we forewent. We were able to demonstrate correlations between membership or participation level and wellbeing, but our ability to explain those relationships was limited because we were not sure how the union may have been materially benefitting or harming participants. In that vein, it would have been useful to assess other factors that affect

wellbeing beyond work and unions, allowing us to control for them in our analyses as in Blanchflower and Bryson (2020).

Our recruitment method was both a strength and a weakness. By asking school administrators and union presidents to distribute the study to their staff or members via email, the study was delivered directly to the intended population without relying on online advertisement, but only at the discretion of the administrator or president, creating a bottleneck in sampling.

Future Research

Future research on unions should continue studying wellbeing and individual differences in conjunction. Studies should be conducted in a variety of countries, industries, union types, and periods—both in terms of years, and during periods of neutral, positive, and negative industrial relations. Each of these settings likely affects wellbeing, and different kinds of people may be more prevalent in some than others. Preferably, these studies would be longitudinal, seeing how the wellbeing of particular unionised and non-unionised workers changes over time. Of particular interest are the differences between blue-, white-, and pink-collar workers, and between workers in the Eastern and the Western worlds. This study, like most others (to our knowledge), has been conducted in the West, even though unions in the East are likely to have more dramatic effects on wellbeing and attract more specific kinds of people due to abject working conditions, the disenfranchisement of workers, and the dangers associated with membership. It would also be beneficial to measure likely indicators of wellbeing in addition to evaluations of wellbeing to help explain wellbeing relationships in more detail. Finally, future research needs to determine the extent of the threat effect, though we are unsure how this should be done—perhaps by asking members and non-members to rate to what extent the influence of unions has improved their wellbeing in specific domains, with the option to provide specific examples of improvements.

Conclusion

Although this thesis connected and addressed multiple gaps in I/O psychology's union literature pertaining to wellbeing and individual differences, the exact nature of the connections between these topics remains unclear, and the gaps in our understanding remain unfilled. Ultimately, we have demonstrated the need to take a holistic approach in future union research: Prospective studies should investigate the (relatively) objective (likely indicators of wellbeing) and subjective (evaluations of wellbeing) aspects of wellbeing in a variety of contexts while accounting for individual differences and external factors likely to be associated with wellbeing.

We might not have found a significant difference in the wellbeing of unionised and non-unionised academic staff in New Zealand and Australia, but unions are not some relic of the past. In the East, unions form the vanguard of disenfranchised workers fighting for what Western workers take for granted as fundamental rights. In the West, unions are seeing a resurgence in popularity—especially among young people, who will carry the ideological torch of organised labour into the future—with high-profile strikes occurring around the world. Just look at the creatives of Hollywood protesting the exploitations of the streaming model and the abuses of AI: As the world changes, and the nature of work with it, the working class will continue to organise to fight for their rights against the obstinate greed of management. It is the ethical responsibility of psychologists to understand the problems of the international working class—which includes academics and scientist-practitioners such as ourselves—and the actual effectiveness of popular remedies for those problems. In the immortal words of Dolly Parton (1980), working nine to five in poor working conditions is "enough to drive you / Crazy if you let it."

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Appendix A: Survey Materials and Final Set of Items Used in Analyses

The following is the information sheet, consent form, instructions, and measures used in our survey, presented in the order they were seen by participants. Participants did not see anything in bold, which has been added for this appendix. Similarly, questions were not numbered in the survey, but have been numbered here for reference. Responses to questions have been italicised for visual distinction. Information in brackets has been added to replace certain Qualtrics formatting that has been removed from this document.

Information Sheet

Despite the pivotal role that unions have played in the development of labour laws across the world, there has been very little psychological research on labour unions and the people who join them. To help us understand how unions affect wellbeing, and so we can develop a profile of the people who do and do not tend to unionize, we invite you—unionized and non-unionized academic staff alike—to participate in this University of Waikato study. Union members and non-union members who take this survey will be asked questions about their wellbeing, personality, and political beliefs. Union members will be asked additional questions about their experiences with and feelings toward unions, while non-union members will be asked why they haven't unionized.

Your participation in the study is entirely voluntary and anonymous—we won't ask your name, and you can stop at any time. Each question must be answered before you can continue to the next question. At the end, if you wish, you can follow a link to provide your e-mail to get a summary of the results of the study and/or enter a draw to win a $50 voucher; if you do, your e-mail address cannot be linked with your answers to these questions. Please only participate in this survey if you are currently employed as an academic staff member at a secondary or tertiary institution. We expect the survey will take about 30 minutes.

The findings of this survey will be reported in a Master's Thesis at the University of Waikato, School of Psychology, and may also be presented at professional conferences and published in the scientific literature. All data will be reported as group patterns so that no person will be identifiable in any reports. The data will be retained for at least five years following completion of the study. If you have any questions about the survey, please feel free to contact me (Cian Sutherland) at cs236@students.waikato.ac.nz. This research is supervised by Professor Nicola Starkey (nstarkey@waikato.ac.nz). This research project has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email alpss ethics@waikato.ac.nz, postal address, Division of Arts, Law, Psychology and Social Sciences, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Consent Form

CONSENT TO PARTICIPATE

I have read and understood the information about this research project. I understand the purpose of this research, what will happen if I participate, and what will happen to the information I provide. I understand the measures in place to protect my privacy and confidentiality, such that the information I provide will be coded by a number that does not identify me. I understand that I can withdraw my consent at any time prior to the end of my scheduled participation, and I do not have to give a reason. I agree to participate in this research, and I understand that checking (ticking) the box below indicates my consent.

Yes, I agree to participate in this research

[Check box]

If you do not wish to participate in this research, please close this browser window now.

Instructions

During this survey, we ask that you comply with the following requirements:

1. Please complete the survey in a single sitting, and do not leave the survey to engage in other tasks. So don't check your email, look at Facebook, send or read a text message, get up for a drink, etc.

2. Please do not use your web browser's back or refresh buttons at any point during the survey.

3. Because this survey requires your close attention, we ask that you complete the survey in an environment that is free of noise and distraction. Please do not speak to anyone, or have anyone near you. Ideally, you would be alone in a quiet room, or in a room where other people are quiet (such as a library).

I understand these instructions, and agree to comply with them for the duration of the survey

[Check box]

Part One: Demographics

Before you start the survey, please answer the following demographic questions.

1. How old are you?
   18 – 100

2. Are you currently employed as an academic staff member at a public secondary or tertiary school?
   Yes / No

3. What age students do you teach? You can select multiple answers
   Younger than 13 – 19 and older

4. What is your gender?
   Man / Woman / Gender-diverse / Something else / Prefer not to say

5. Where do you live?
   New Zealand / Australia

6. What is your ethnicity?
   [Free response]

7. What is the highest level of education you have completed?
   Degree, e.g., MA, PhD, BA, BSc, Medicine / Diploma or certificate / Trade or Technical qualification, e.g., apprenticeship / Other

8. Which political orientation do you most identify with?
   Far left / Left / Center-left / Center / Center-right / Right / Far right

9. Thinking about your financial situation right now, would you say:
   I cannot make ends meet / I make just enough money to get by / I make enough money to live comfortably / Don't know / Prefer not to say

10. What is your occupation?
    [Free response]

11. In years, how long have you been working in the education sector? Please respond in numerals.
    [Free response]

Part Two: Union Membership

1. Please indicate whether or not you are a member of at least one educator's union
   Yes / No

Part Three: Union-Related Questions for Union Members

Note: The questions comprising the Union Participation and Group Identification subscales were as follows:

Union Participation = 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Group Identification = 31, 33, 39, 41, 45, 48

In this section, we will ask you questions about your experience with and feelings toward unions, and your motivations to unionize.

1. Please tell us which educator's union(s) you are a member of.
   Post Primary Teachers' Association / Tertiary Education Union / Australian Education Union / National Tertiary Education Union / New South Wales Teachers Federation / State School Teachers' Union of Western Australia / Queensland Teachers' Union

2. It may be the case that you have been a member of multiple unions, or left a union and took an extended break from unionization before rejoining a new union. In total, how many years have you been a member of a union? Please respond in numerals.
   [Free response]

Over the next 12 months, how likely is it that you will participate in your union in the following ways?

7-Point Likert scale (*1* = *Not at all likely*, *7* = *Extremely likely*, *2-6* were unlabelled)

3. Attend branch meetings
4. Speak at branch meetings

5. Vote in union elections (if they take place)
6. Stand as an elected branch official
7. Be a union delegate at a national meeting or conference
8. Attend a union rally or demonstration (if one is held)
9. Discuss union affairs with colleagues
10. Read a union journal or magazine
11. Help with union campaigns or elections
12. Take part in industrial action, e.g., strikes (if any action takes place)

Assuming that one of the aims of your union is to increase its influence in your workplace:

13. How desirable is this aim in your opinion?
    7-Point Likert scale (*1* = *Not at all desirable, 7 = Extremely desirable, 2-6* were unlabelled)

14. Would greater participation in the union on your part make any difference to achieving this aim?
7-Point Likert scale (*1* = *No, it wouldn't, 7 = Yes, it would, 2-6* were unlabelled)

15. If the union were more influential in your workplace, do you think it would be able to negotiate better terms and conditions for its members?
7-Point Likert scale (*1* = *No, it wouldn't, 7 = Yes, it would, 2-6* were unlabelled)

Below are a series of statements about being a union activist (i.e., someone who regularly attends union meetings, stands for local office, attends national meetings, etc.). Please respond to each statement by indicating how much you agree or disagree with that statement.

7-Point Likert scale (*1* = *Strongly disagree*, *7* = *Strongly agree*, *2-6* were unlabelled)

16. Being a union activist makes it less likely that you will get a promotion
17. Being a union activist takes up a lot of time
18. Being a union activist is a good way of getting to know lots of people in the organization
19. Being a union activist gives you a reputation in the organization as a troublemaker
20. Being a union activist gives you the chance to express your political beliefs

21. Being a union activist gives you the chance to influence the beliefs and actions of other people

If you were to become a union activist (i.e., regularly attending union meetings, standing for local office, attending national meetings, etc.)...

7-Point Likert scale (*1* = *Extremely unfavourably*, *7* = *Extremely favourably*, *2-6* were unlabelled)

22. How would your colleagues react?
23. How would your immediate superiors react?
24. How would your partner/members of your family react?
25. How would your closest friends react?

How much importance do you attach to the reactions of...

7-Point Likert scale (*1* = *None at all*, *7* = *A great deal*, *2-6* were unlabelled)

26. Your colleagues
27. Your immediate superiors
28. Your partner/family members
29. Your closest friends

In this section, please give your own opinions about each of the following statements.

7-Point Likert scale, *1* = *Strongly disagree*, *7* = *Strongly agree*, *2-6* were unlabelled)

30. The best way to solve problems at work is collectively
31. I would always join the union no matter where I worked
32. I feel a strong sense of "them and us" between workers and managers at work
33. I identify strongly with the union
34. You can never really trust management
35. Improvements in terms and conditions at work will only be achieved through collective action
36. I work better in a group than on my own
37. Every individual can have an impact on the outcome of a political campaign
38. I feel that workers and management are really on opposite sides in my organization

39. I feel strong ties with other union members
40. If there wasn't a union, management would take advantage of the workforce
41. I see myself as a union activist
42. I think of myself as a "joiner" of groups
43. In the long run, the only person you can count on is yourself
44. I feel badly off compared to other people doing my job
45. I am glad I am a member of the union
46. There's not much point in participating in political campaigns: one person's participation won't make any difference
47. I feel that members of my union are badly off compared with other similar groups in society
48. It is important to me that I am a member of the union
49. Working with others is usually more trouble than it's worth
50. Only those who depend on themselves at work get ahead

People have different motivations when joining a labour union. Some people have an 'instrumental motivation,' meaning they are primarily concerned with the personal benefits their union membership affords them, e.g., wage premiums, better working conditions, worker protections, etc. Some people have an 'ideological motivation,' meaning they are primarily concerned with living in accordance with their sociocultural and/or political beliefs, even if unionizing and participating in collective action could make their life more difficult.

51. How would you describe your motivation to unionize?
    Purely instrumental motivation / Mostly instrumental motivation, some ideological motivation / Equal instrumental and ideological motivations / Mostly ideological motivation, some instrumental motivation / Purely ideological motivation

52. The ultimate goal of your union is to improve the wellbeing of all workers by improving their working conditions. Which of the following statements do you most agree with?
    Unionization has noticeably improved my wellbeing and my working conditions / Unionization has noticeably improved my wellbeing but it has not noticeably improved my working conditions / Unionization has noticeably improved my working

conditions but it has not noticeably improved my wellbeing / Unionization has not noticeably improved my wellbeing nor my working conditions

Part Four: Union-Related Questions for Non-Union Members

In this section, we will ask you questions about your feelings toward, and reasons for not joining, a union.

1. There are a number of reasons why someone might not join a union. Of the reasons listed below, which do you identify with?
   (Participants could choose multiple of the following)

   Membership fees are too expensive / I'm not willing to participate in collective action, e.g., striking / The union does not achieve anything I value / There is no point joining since I get all the benefits anyway / I don't believe in unions / Unions do not cooperate enough with management for the good of the workplace

2. How do you feel about unions?
   I'm anti-union / I'm ambivalent towards unions / I'm pro-union

3. If someone asked you to join a union, how likely is it that you would do so?
   Very unlikely / Unlikely / Likely / Very likely / Don't know

Even if you are not currently a member of a union, the ultimate goal of unionization is to improve the wellbeing of all workers by improving their working conditions. Education is a highly unionized sector, and it's likely that many of your coworkers are unionized, and you might enjoy some benefits that have been won by unions despite not being a member yourself.

4. Considering this, which of the following statements do you agree with?
   The influence of unions has noticeably improved my wellbeing, even though I'm not a member / The influence of unions has noticeably improved my working conditions, even though I'm not a member / I do not agree with either of these statements

Part Five: HEXACO-60, Interstitial Altruism Scale, and IPIP Neuroticism Scale

Note: Questions 63, 66, 69, and 72 belong to the Interstitial Altruism Scale, and questions 61, 62, 64, 65, 67, 68, 70, 71, 73, and 74 belong to the IPIP Neuroticism Scale.

In this section, you will take a brief personality test. On the following pages, you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Please answer every statement, even if you are not completely sure of your response.

5-Point Likert scale (*1* = *Strongly disagree*, *2* = *Disagree*, *3* = *Neutral*, *4* = *Agree*, *5* = *Strongly agree*)

1. I would be quite bored by a visit to an art gallery
2. I plan ahead and organize things, to avoid scrambling at the last minute
3. I rarely hold a grudge, even against people who have badly wronged me
4. I feel reasonably satisfied with myself overall
5. I would feel afraid if I had to travel in bad weather conditions
6. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed
7. I'm interested in learning about the history and politics of other countries
8. I often push myself very hard when trying to achieve a goal
9. People sometimes tell me that I am too critical of others
10. I rarely express my opinions in group meetings
11. I sometimes can't help worrying about little things
12. If I knew that I could never get caught, I would be willing to steal a million dollars
13. I would enjoy creating a work of art, such as a novel, a song, or a painting
14. When working on something, I don't pay much attention to small details
15. People sometimes tell me that I'm too stubborn
16. I prefer jobs that involve active social interaction to those that involve working alone
17. When I suffer from a painful experience, I need someone to make me feel comfortable
18. Having a lot of money is not especially important to me
19. I think that paying attention to radical ideas is a waste of time
20. I make decisions based on the feeling of the moment rather than on careful thought
21. People think of me as someone who has a quick temper

22. On most days, I feel cheerful and optimistic
23. I feel like crying when I see other people crying
24. I think that I am entitled to more respect than the average person is
25. If I had the opportunity, I would like to attend a classical music concert
26. When working, I sometimes have difficulties due to being disorganized
27. My attitude toward people who have treated me badly is “forgive and forget”
28. I feel that I am an unpopular person
29. When it comes to physical danger, I am very fearful
30. If I want something from someone, I will laugh at that person’s worst jokes
31. I’ve never really enjoyed looking through an encyclopedia
32. I do only the minimum amount of work needed to get by
33. I tend to be lenient in judging other people
34. In social situations, I’m usually the one who makes the first move
35. I worry a lot less than most people do
36. I would never accept a bribe, even if it were very large
37. People have often told me that I have a good imagination
38. I always try to be accurate in my work, even at the expense of time
39. I am usually quite flexible in my opinions when people disagree with me
40. The first thing that I always do in a new place is to make friends
41. I can handle difficult situations without needing emotional support from anyone else
42. I would get a lot of pleasure from owning expensive luxury goods
43. I like people who have unconventional views
44. I make a lot of mistakes because I don’t think before I act
45. Most people tend to get angry more quickly than I do
46. Most people are more upbeat and dynamic than I generally am
47. I feel strong emotions when someone close to me is going away for a long time
48. I want people to know that I am an important person of high status
49. I don’t think of myself as the artistic or creative type
50. People often call me a perfectionist
51. Even when people make a lot of mistakes, I rarely say anything negative
52. I sometimes feel that I am a worthless person
53. Even in an emergency I wouldn’t feel like panicking
54. I wouldn’t pretend to like someone just to get that person to do favours for me
55. I find it boring to discuss philosophy

56. I prefer to do whatever comes to mind, rather than stick to a plan
57. When people tell me that I'm wrong, my first reaction is to argue with them
58. When I'm in a group of people, I'm often the one who speaks on behalf of the group
59. I remain unemotional even in situations where most people get very sentimental
60. I'd be tempted to use counterfeit money, if I were sure I could get away with it
61. I am very pleased with myself
62. I am often down in the dumps
63. I have sympathy for people who are less fortunate than I am
64. I feel comfortable with myself
65. I often feel blue
66. I try to give generously to those in need
67. I panic easily
68. I rarely get irritated
69. It wouldn't bother me to harm someone I didn't like
70. I dislike myself
71. I have frequent mood swings
72. People see me as a hard-hearted person
73. I seldom feel blue
74. I am not easily bothered by things

Part 6: Authenticity Scale

Note: To maximise Cronbach's alpha, we removed question 1 from the Authentic Living subscale.

In this section, you will take a brief authenticity test. On the following page, you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Please answer every statement, even if you are not completely sure of your response.

> **7-Point Likert scale (***1 = Does not describe me at all***,** *7 = Describes me very well***,** *2-6* **were unlabelled)**

1. I think it is better to be yourself, than to be popular
2. I always stand by what I believe in
3. I am true to myself in most situations

4. I live in accordance with my values and beliefs
5. I am strongly influenced by the opinions of others
6. I usually do what other people tell me to do
7. I always feel I need to do what others expect me to do
8. Other people influence me greatly
9. I don't know how I really feel inside
10. I feel as if I don't know myself very well
11. I feel out of touch with the 'real me'
12. I feel alienated from myself

Part Seven: I COPPE Wellbeing

In this section, we will ask you questions meant to broadly measure your feelings about your holistic, interpersonal, communal, occupational, physical, psychological, and economic wellbeing. Please answer them honestly.

On the vertical scale, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be.

10

9

8

7

6

5

4

3

2

1

0

1. When it comes to the best possible life for you, on which number do you stand now?
2. When it comes to the best possible life for you, on which number did you stand a year ago?
3. When it comes to the best possible life for you, on which number do you think you will stand a year from now?
4. When it comes to relationships with important people in your life, on which number do you stand now?
5. When it comes to relationships with important people in your life, on which number did you stand a year ago?
6. When it comes to relationships with important people in your life, on which number do you think you will stand a year from now?
7. When it comes to the community where you live, on which number do you stand now?
8. When it comes to the community where you live, on which number did you stand a year ago?
9. When it comes to the community where you live, on which number do you think you will stand a year from now?
10. When it comes to your main occupation (employed, self-employed, volunteer, stay at home), on which number do you stand now?
11. When it comes to your main occupation (employed, self-employed, volunteer, stay at home), on which number did you stand a year ago?
12. When it comes to your main occupation (employed, self-employed, volunteer, stay at home), on which number do you think you will stand a year from now?
13. When it comes to your physical health and wellness, on which number do you stand now?
14. When it comes to your physical health and wellness, on which number did you stand a year ago?
15. When it comes to your physical health and wellness, on which number do you think you will stand a year from now?
16. When it comes to your emotional and psychological wellbeing, on which number do you stand now?
17. When it comes to your emotional and psychological wellbeing, on which number did you stand a year ago?

18. When it comes to your emotional and psychological wellbeing, on which number do you think you will stand a year from now?
19. When it comes to your economic situation, on which number do you stand now?
20. When it comes to your economic situation, on which number did you stand a year ago?
21. When it comes to your economic situation, on which number do you think you will stand a year from now?

Part Eight: Auckland Individualism Collectivism Scale

Note: We excluded certain questions from the AICS subscales to maximise their Cronbach's alpha. The final subscales were comprised of the following questions:

Responsibility = 24, 26, 28, 30

Unique = 21, 22

Compete = 17, 18, 19, 20

Advice = 2, 3

Harmony = 5, 6, 7, 8, 9, 10

Closeness = 11, 12, 13, 15, 16

In this section, we will determine whether you are more of an individualist or more of a collectivist. On the following page, you will find a series of statements about how often you do certain things. Please answer every statement, even if you are not completely sure of your response.

6-Point Likert scale (1 = Never or almost never**, 6** = Aways**,** *2-5* **were unlabelled)**

1. I discuss job or study-related problems with my parents
2. I consult my family before making an important decision
3. Before taking a major trip, I consult with most members of my family and many friends
4. It is important to consult close friends and get their ideas before making a decision
5. Even when I strongly disagree with my group members, I avoid an argument
6. I hate to disagree with others in my group

7. It is important to make a good impression on one's manager
8. In interacting with superiors, I am always polite
9. It is important to consider the needs of those who work above me
10. I sacrifice my self-interest for the benefit of the group
11. I reveal personal things about myself
12. I have the feeling that my relationships with others are more important than my own accomplishments
13. I like to live close to my good friends
14. To me, pleasure is spending time with my superiors
15. To me, pleasure is spending time with others
16. I help acquaintances, even if it is inconvenient
17. I define myself as a competitive person
18. I enjoy working in situations involving competition with others
19. Without competition, it is not possible to have a good society
20. Competition is the law of nature
21. I consider myself as a unique person separate from others
22. I enjoy being unique and different from others
23. I see myself as "my own person"
24. I take responsibility for my own actions
25. It is important for me to act as an independent person
26. Being able to take care of myself is a primary concern for me
27. I consult with my superior on work-related matters
28. I prefer to be self-reliant rather than depend on others
29. It is my duty to take care of my family, even when I have to sacrifice what I want
30. When faced with a difficult personal problem, it is better to decide for myself, than follow the advice of others

Part Nine: Compliance

You will recall that we asked you to meet certain criteria and to take certain steps to avoid distractions during the experiment. Now we want to know if you really followed the rules we asked you to follow. If you wish to, you can still go in the draw to win a voucher regardless of your response, so please be honest. We need your honest answer so we know how to analyze the data you have provided us.

Thank you for your help.

1. Did you complete the session in a single sitting, without stopping?
   Yes / No

2. Did you complete the session in an environment that is free of noise and distraction?
   Yes / No

Part Ten: Link to Incentive Survey

Thank you very much for taking the time to complete our survey. If the survey has distressed you in any way and you need help, there are people you can contact, such as Lifeline in NZ (https://www.lifeline.org.nz/services/suicide-crisis-helpline/) or Beyond Blue in Australia (https://www.beyondblue.org.au/).

1. Would you like to anonymously submit your email to go into the draw to win a voucher and/or receive a summary of our results once our research is complete? Your email cannot be linked to your survey responses in any way.
   Yes / No

Appendix B: School and Union Email Templates

School Email Template

Dear [*insert principal name here*],

My name is Cian Sutherland, and I am a psychology student at the University of Waikato, studying under the supervision of Professor Nicola Starkey. Despite the pivotal role that labour unions have played in the development of labour laws across the world, there has been very little research about them. For my master's thesis, I'm hoping to elucidate the relationship between unionization and wellbeing, and to see what kinds of people do and do not tend to unionize.

To answer these questions, we have chosen to survey academic staff—not professional staff—at secondary and tertiary schools in NZ (where we live) and Australia. To understand the impact of unions by making comparisons, we will need both current union and non-union academic staff to complete our anonymous survey. Those who do so can follow a link to provide their email to get a summary of our results and/or go in the draw to win a voucher. Union members and non-union members who take this survey will be asked questions about their wellbeing, personality, and political beliefs. Union members will also be asked additional questions about their experiences with and feelings toward unions, while non-union members will be asked why they haven't unionized. We expect the survey will take about 30 minutes to complete.

Nicola and I would be so grateful if you could please forward this email to your academic staff [schools]/members [unions] and encourage them to participate. We are aiming for a minimum of 500 unionized and 500 non-unionized educators in NZ and Australia each, for a total of 2000 participants, but the more, the merrier. This survey cannot be found on Google and is not being distributed on any website, meaning your sharing of it is the only way we can successfully conduct our study, so we would appreciate your help!

Survey link: [*insert link here*]

Thank you,

Cian Sutherland

Union Email Template

Dear [*insert president name here*] and members of the [*insert union name here*],

My name is Cian Sutherland, and I am a psychology student at the University of Waikato, studying under the supervision of Professor Nicola Starkey. Despite the pivotal role that labour unions have played in the development of labour laws across the world, there has been very little research about them. For my master's thesis, I'm hoping to elucidate the relationship between unionization and wellbeing, and to see what kinds of people do and do not tend to unionize.

To answer these questions, we have chosen to survey academic staff—not professional

staff—at public secondary and tertiary schools in NZ and Australia. To understand the impact of unions by making comparisons, we will need both current union and non-union academic staff to complete our anonymous survey. To that end, we have emailed the principals of secondary schools and the deans of universities and asked them to circulate the survey to their staff. We would be very grateful if you did the same with your union members. We are aiming for a minimum of 500 unionized and 500 non-unionized educators in NZ and Australia each, for a total of 2000 participants, but the more, the merrier. This survey cannot be found on Google and is not being distributed on any website, meaning your sharing of it is the only way we can successfully conduct our study; we would appreciate your help! We're happy to send you any more information about the study or answer any questions you might have.

Those who complete the survey can provide their email to get a summary of our results and/or go in the draw to win a voucher. The email is recorded separately from their survey response, so the two cannot be linked. The more responses we get, the more vouchers we will offer! Everyone who takes this survey will be asked questions about their wellbeing, personality, and political beliefs. Union members will also be asked additional questions about their experiences with and feelings toward unions, while non-union members will be asked why they haven't unionized. We expect the survey will take about 30 minutes to complete, and it will be open until the 14th of September. This study has been approved by the University of Waikato's ALPSS Human Research Ethics Committee (FS2023-18).

Survey link: [*insert link here*]

Thank you,

Cian Sutherland

Appendix C: Preregistration

1) Data Collection. Have any data been collected for this study already?

It’s complicated.

2) Hypothesis. What's the main question being asked or hypothesis being tested in this study?

Q1a: How does the wellbeing of academic staff differ between dedicated union members (more likely to participate in harder union activities), casual union members (more likely to participate in easier union activities), and non-members? Further, does the wellbeing of these groups differ between New Zealand and Australia?

Q1b: How do dedicated union members, casual union members, and non-members in New Zealand and Australia perceive the effects of education unions on their wellbeing and working conditions?

Q2: Considering personality (HEXACO, altruism, neuroticism, authenticity) and sociopolitical (demographics, political orientation, individualism-collectivism) characteristics, what kinds of people tend to join unions, and what kinds do not? Further, do these kinds of people differ between New Zealand and Australia?

Q3: To what extent can the wellbeing of academic staff be predicted by unionisation over and above other personality and sociopolitical characteristics, and does this predictability differ between New Zealand and Australia?

3) Dependent variable. Describe the key dependent variable(s) specifying how they will be measured.

- Political orientation will be measured with a study-specific question.
- Whether or not a union member is dedicated or casual will be measured using questions taken from sections one and three of the unnamed survey used in 'Who Gets Involved in Collective Action?' (Kelly & Kelly, 1994). These questions also measure opinions about unionisation, union activism, the influence of unions, and working/the workplace.
- Motivation to unionise or reasons for not unionising will be measured with study-specific questions.
- Feelings about the efficacy of unions (i.e., whether they improve wellbeing and working conditions) will be measured with study-specific questions.
- Our chosen personality traits will be measured by the HEXACO-60, the HEXACO interstitial altruism scale, and the IPIP-Neo's 10-item neuroticism scale.
- Authenticity will be measured with the Authenticity Scale.
- Wellbeing will be measured with the I COPPE Scale.
- Individualism-collectivism will be measured with the Auckland Individualism Collectivism Scale.

4) Conditions. How many and which conditions will participants be assigned to?

Our study is quasi-experimental. We will conduct our analyses between subjects, with three main groups: dedicated union members, casual union members, and non-union members. We will further divide these into New Zealand and Australian groups (a total of six groups) unless the differences between them are non-significant or the sizes of the groups are insufficient for analyses, in which case we will collapse them.

5) Analyses. Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Q1a + b: A 2 (country: New Zealand, Australia) x 2 (union membership: member, non-member) ANOVA comparing wellbeing between New Zealand and Australian union members and non-members. Following this, a 2 (country: New Zealand, Australia) x 2 (union membership: dedicated, casual) ANOVA comparing wellbeing between New Zealand and Australian dedicated and casual union members. Repeat both ANOVAs comparing perceptions of union efficacy instead of wellbeing.

Q2: Two logistic regressions (one each for New Zealand and Australia) with union membership (member, non-member) as our outcome variable and political orientation, HEXACO-60 scores, interstitial altruism scale scores, IPIP neuroticism scale scores, Authenticity Scale scores, and AICS scores as our predictor variables. Repeat the regression with the same predictors but union membership (casual, dedicated) as our outcome variable. We are also interested in the means of the other Kelly & Kelly survey scores (opinions about unionisation, union activism, the influence of unions, and working/the workplace), motivation to unionise (union member) or reasons for not unionising (non-member), and opinion of unions (non-members); we will perform t-tests to see if they are significantly different between New Zealand and Australia, and casual and dedicated union members where applicable.

Q3: We will perform a series of exploratory analyses to identify interaction terms and check that assumptions are met. We will then perform a hierarchical regression with wellbeing as the outcome variable and demographics (gender, age, ethnicity, income), union membership (dedicated, casual, non-member), personality traits (HEXACO, altruism, neuroticism), authenticity, individualism-collectivism, and political orientation as predictors; we will insert them into the model in that order.

6) Outliers and Exclusions. Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We will exclude any participant who provides non-sensical responses or fails to complete the I COPPE.

7) Sample Size. How many observations will be collected or what will determine sample size?

2000 participants - this number was decided arbitrarily in the absence of a power analysis, motivated by the high number of teachers currently employed in New Zealand and Australia. Note that we are using 469 responses for our analyses in the thesis, but may collect more responses from Australian secondary schools for use in future analyses (should we receive approval from the relevant governments).

8) Other. Anything else you would like to pre-register?

Vis-à-vis data collection, we have finished collecting data from New Zealand secondary and tertiary schools, and Australian tertiary schools, but we have not officially begun collecting data from Australian secondary schools, as we are waiting for approval from the various Australian governments to conduct our study. Due to the time constraints of the University of Waikato PSYCH594 thesis, we must proceed with the data we have collected thus far. We have not yet analysed any of our data. The (hypothetical) Australian secondary school data will not be collected in time for use in the thesis but may be used in future reports.

9) Name: Give a title for this AsPredicted pre-registration

Unionization, Wellbeing, and Personality - University of Waikato PSYCH594 Thesis

10) Type of study

Survey

11) Data source

Other (Qualtrics)